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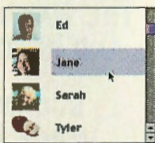
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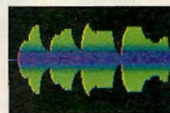
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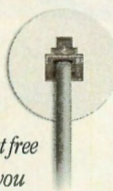
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MY GOD! What happened to your nose?

JANUARY 2000

MacAddict

42

highlights

28 Mac to the Future

Your Mac is unlikely to fall victim to the dreaded Y2K bug, but we wouldn't want you to miss out on *all* the fun of the new year. If you're itching for a little space-age action, cool your jet packs and join us here in the future. **BY MARK SIMMONS**

34 It Lives!

It's creepy and it's kooky. Mysterious and spooky. It's altogether ooky—the iBorg and its team! Ian and Dave build a killer iBook iBorg. Watch out PC Accelerator, here it comes! **BY IAN SAMMIS AND DAVID REYNOLDS**

38 Desktop of Tomorrow

You could sit there using yesterday's outdated desktop scheme, but then you could also be wearing legwarmers and parachute pants. You aren't, are you? Transform your desktop into a well-oiled, speed-mousing machine using tomorrow's technology today—we'll show you how! **BY DAVID REYNOLDS**

47 iBook Fashion

Everyone's going gaga over Apple's new iBook. The pretty portable with its fresh design and translucent colors steals every scene in our photographic foray into fashion. **BY ROBERT CAPPS, PHOTOGRAPHS BY AARON LAUER**



MUST...KEEP...RING...FINGER...behind...iBook!

how to

76 Filter Your Email

BY IAN SAMMIS

82 Make a QTVR Object

BY IAN SAMMIS

86 Use Multiple Users

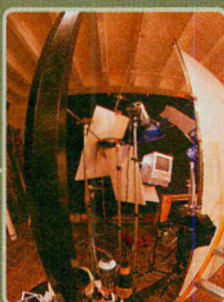
BY DAVID REYNOLDS

94 Make a Shockwave Game

BY RICK SANCHEZ



AND THE ROCKET'S RED GLARE, the bombs bursting in air..



It took Aaron Lauer 15 stands, five lights, and nine hours to make our tinfoil Mac fly!

REPRINTS

For reprints, contact RMS at 717-560-2001.

Volume 4, Issue 12

MacAddict (ISSN 1088-548X) is published monthly by Imagine Media, Inc., 150 North Hill Dr., Suite 40, Brisbane, CA 94005, USA. Periodical-class postage paid at Brisbane, CA, and at additional mailing offices. Newsstand distribution is handled by Curtis Circulation Co. Basic subscription rates: one year (12 issues) + 12 CD-ROMs) U.S. \$39.90, Canada \$43.95, U.S. prepaid funds only. Canadian price includes postage and GST 128220688. IPM 0962392. Outside the U.S. and Canada, price is \$53.95, U.S. prepaid funds only. POSTMASTER: Send address changes to MacAddict, P.O. Box 58251, Boulder, CO 80328-8251. Imagine Media, Inc. also publishes *Maximum PC*, *Business 2.0*, *Games Business*, *Next Generation*, *PC Accelerator*, *PC Gamer*, and *PSM*. Entire contents copyright 1999, Imagine Media, Inc. All rights reserved. Reproduction in whole or in part is prohibited. Imagine Media, Inc. is not affiliated with the companies or products covered in MacAddict. Standard Mail Enclosed Edition: A, A1, A2, A3, A4, B, B1, B2, B3, PRODUCED IN THE UNITED STATES OF AMERICA.

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GET to seeing this
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on the Mac.



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12 Editor's Note

It's the future already! Get out your crossbows and muscle cars!

14 Letters

The only place where people expect their two cents to buy them a G4.

18 Get Info

Half-Life got gunned down and GIFBuilder died quietly in its bed, but at least Ambrosia's marketing guy has all he can eat. We also check out StarPlay's claim of having 10 tons of fun, and take another opportunity to rave about IPNetMonitor.

26 Scrapbook

We put on the rubber gloves, get out the magnifying glass, and take an intimate look at Apple's new consumer video editing software package, iMovie. Eew.

50 Reviews

Hangover cleared, ring in the New Year with the slick, quick, oh-so-cute iBook. We take off with Fly! scan with the AFGA Snapscan, and build teeming metropolises with SimCity 3000. New incarnations of Toast, Type-Style, Norton Utilities and AntiVirus, and other goodies also get a look-see.

74 PowerPlay

Give Myth II new life with four of the hottest plug-ins available. Plus, Ares (as we previewed in issue one) finally makes its debut, and, despite our better judgment, we publish our first installment of great reader screenshots.

104 Ask Us

Buz Zoller rocks like the lentil he is in his debut Ask Us offering. Tune in for answers to Digital8 queries, networking glitches, and storage woes.

136 Shutdown

Something smells mighty funny here—oh, wait. That's the odor of quiet desperation. The humorous scents are in the *back* of the book.

MacAddict

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Whew, It's back. How's that movie Narasu? Takin' any good digital photos lately Nikki? No touching in the Champagne room. Thanks Dan! Right on.





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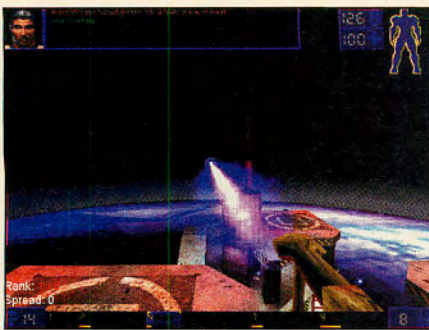
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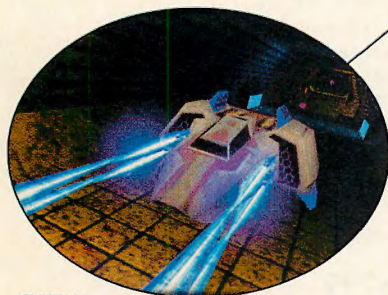
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WITHOUT A TARGET, this rocket will launch to infinity and beyond!



UH, JUST A LITTLE SHAMELESS plug for a new digital music one-shot Imagine Media is releasing.

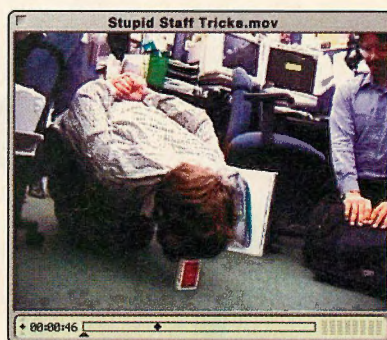
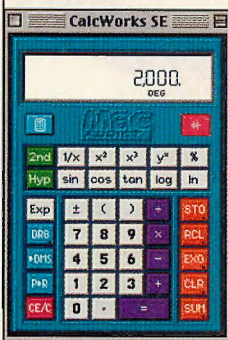


DAMN! NO AIR-SICKNESS bags? How about some peanuts, then?



DANGER, DANGER...this player may induce some serious booty shakin'!

MMMM, OURS TASTES like blueberry!



DAVE REYNOLDS MATTER-OF-FACTLY STATED there was something women could do that men could not. We attempted to prove his theory wrong. Too bad we got to the video camera after Dave and Rob had their turn. If Dave's theory is true, he and Rob are all woman. You go, girls!

100% Y2K Compliant!

Celebrate the New Year with These Highlights

Unreal Tournament Demo

It's a fight to the finish in this latest seek-and-destroy, shoot-to-kill fragfest. Tournament delivers nonstop, heart-pounding combat and allows you to play multiplayer games whether you're connected to the Net or not. Join your team's assault as you challenge other teams in various gameplay modes, including Capture the Flag, Team Deathmatch, Deathmatch, and Domination. Wimps need not apply.

Photoshop 5.5 Tryout

This industry-standard image-editing powerhouse now takes all Web graphics gurus under its mighty wing. With the addition of ImageReady 2.0, the latest version features tools specially designed for Web graphics optimization. Slice, dice, and julienne your photos and graphics to pristine perfection.

Decent 3 Demo

Wow, Duane—you've done well! Anyone who remembers MacDescent 3dxf from a past MacAddict disc will be happy to know this software's creator is the lead port programmer of the official Descent 3. Running on the new Fusion Engine, D3 blasts you through a white-knuckle spaceship ride through amazing 3D graphics. So pop a Dramamine and get ready for warp speed!

QDesign MVP 1.0 Trial

Anyone who's serious about digital music will want to check this one out. MVP is the first cross-platform MP3 player and audio production system that fully supports the Secure Digital Music Initiative along with its proprietary QDesign audio format. Play over 20 popular audio and video formats on one player, including streaming content. It just may become your Most Valuable Player.

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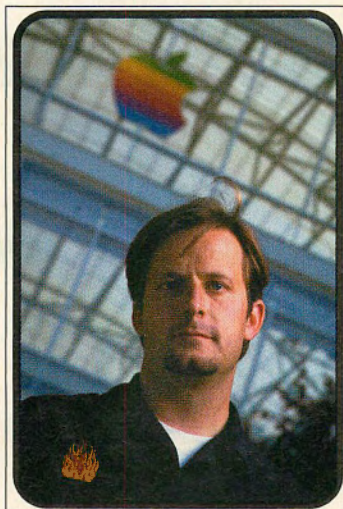
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editor's note

If the power doesn't go out on Jan. 1, I'm takin' it out, dagnab it.

Okay, it's not a new millennium—I hear you. Heck, it's not even a new century. Fine, you sticklers, we'll wait until 2001 to start celebrating the Big Ones. It is, however, a new year and one of the traditions here at *MacAddict* is that as a new year begins, we gather the staff together and randomly predict the events of the coming 12 months. Keeping with that tradition, in early November, I sat all your favorite editors around a tiny desk in our office, gave them too much beer and sake, and forced them to look deeply into their crystal balls. Here's what they figured Y2K will bring for the Mac, Apple, and the rest of the world.



DON'T HATE HIM because he's beautiful.

- At least two additional parts of the Mac OS will don the "brushed-metal" look introduced by QuickTime 4 and Final Cut. QuickTime 4 will come to be known as The Brushed-Metal Virus.
- Steve Jobs will publicly utter the phrase "I almost forgot..." no less than five times.
- G4s will morph into PowerBook form.
- We'll see snap-on color schemes for Macs.
- Steve Jobs will push his luck too far with some grand scheme, prompting Apple insiders to say, "Oh yeah, *that's* why we fired him the first time..."
- Mac OS 9.1 will ship.
- Mac OS X will ship. It will be totally unlike the current Mac OS and cause panic and confusion—but it will rock!

- You'll be able to pick up a used generator for \$1.95.
- The DOJ will split up Microsoft.
- Jean-Louis Gassée will call his Be operating system "the ultimate multimedia operating system," but no one will care.
- G4s will reach 700MHz.
- Pentiums will reach 1 GHz.
- Muscle car and arm-mount crossbow sales will rise.
- Logicware will change its name to Vaporware.
- You'll be able to buy a whole new Mac for \$99 (or something like a whole new Mac anyway).

- Crayola will introduce Bondi Blue to its crayon color collection, and Apple will thank them with a massive lawsuit.
- Pokemon will go the way of the Teenage Mutant Ninja Turtles (and pet rocks).
- Tinfoil will be big.
- Wireless networking will blossom as Apple introduces FireWireless connectivity.
- iBook fashion spreads will dominate Vogue, Cosmopolitan, and Details.
- Steve Jobs will legalize marijuana at Apple.
- Disney will purchase both Apple and Pixar.
- Larry Ellison will make more than 15 completely bizarre comments.
- DVD movie hacking will grow, yielding a vast illegal online movie market.
- *MacAddict* will publish its biggest issue ever.
- Dave and Ian will make geeky references to obscure parts of the Mac OS.

Muscle car and arm-mount crossbow sales will rise.

Staff Rants

These folks will be the first to go when the new millennium really comes.



Kris Fong
Digital Media Editor

Q. What are your plans for New Years Eve?

A. To be a stumbling, happy drunk wandering aimlessly through the crowded San Francisco streets, wondering why I'm even there in the first place.

Q. What will be big next year?

A. Hmmmm...Steve Jobs's ego, Bill Gates's wallet, Lara Croft's chest, and hopefully my salary.



David Reynolds
Agent of Entropy

Q. What are your plans for New Years Eve?

A. To hunker in my bunker with a lunger.

Q. What will be big next year?

A. Porky's. Definitely Porky's. I hear they're starting up the movie franchise again. Oh, and the G4s will sell like hotcakes.



Jenmo
Managing Editor, Rockstar

Q. What are your plans for New Years Eve?

A. Body shots at the SF Symphony Gala champagne reception...well-timed, crude outbursts during the performances...gettin' jiggy with Strauss later on.

Q. What will be big next year?

A. iBook fanny packs with extra zippers. Silver bodysuits. DNA-based criminology.

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letters

Complaints, kudos, conspiracies, and lusting hearts, oh, the drama!

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CHEEZED OFF

What's the deal with Cheez-Its? I've read enough about them in your magazine and have heard more than enough about them in gamer chats. The bottom line is, they suck. I suggest you get a big bag of Fritos (not the Scoops or those new stupid racecar Fritos) and retire the Cheez-Its along with the G3s. Fritos rule and will soon be classified as *superchips*, since you can easily eat a billion of them and not get enough. —MARK KIBBEY

RECENTLY SIGHTED

My company (shameless plug—Avanti Press, aka the coolest greeting card company in Detroit) is in the process of moving, and we just bought 26 iMacs! I thought you might like to see all of them nestled together. Aren't they cute? Now, who gets what flavor? —KRISTINA TROXELL



WE LIKE ORANGE!

KEVIN, YOU IGNORANT SLUT!

Kevin Savetz may want to throw out his lowly puzzle in the Apple Menu ("ANALize Your Mac," Nov/99, p44), but I love it for something quiet and slow to do while talking on the phone. Of course, I don't keep the silly map picture—I use more interesting pictures such as Jackson Pollock's "White Wall" or illustrations from *Where the Wild Things Are*. —RUTHALICE ANDERSON

In "ANALize Your Mac," Kevin Savetz suggested giving old hardware and software to schools. Please stop giving old stuff to us! If an individual or company finds the equipment too outdated to be very useful, why do you give it to the schools? Sure, we can use a few old pieces, but mostly we have to spend dollars or precious staff time to upgrade them to fit into our networks or get them working. Or, we have to pay to dispose of them.

We have standards that equipment must meet before we buy it so that all of our pieces work together. Would you pay to upgrade your equipment to our standards before donating them? Are we supposed to prepare students to enter the workforce with the workforce's old equipment? Think again about what you are saying. —ANNETTE SCHALO

AS CLEAR AS...PLASTIC

In his dead-on accurate review of the G3 laptop (*Reviews*, Oct/99, p42), which I own, David Reynolds makes the following recommendation regarding the scars the

keyboard leaves on the screen: "For extra protection, just lay a piece of plastic between the monitor and the keyboard when closing." Could I get a little clarity, please? A piece of plastic? Like Saran Wrap? Like an overhead acetate? Like a Tupperware lid? I would appreciate any clarification. —DEREK WESLEY SELBY

You want something thicker than Saran Wrap but thinner than a Tupperware lid—it doesn't even have to be plastic. A light cloth will do. Now please don't ask us what kind of cloth to use (sigh). —DR

GROOVY, DADDY-O

Did anyone else notice that if you shaved the head of David Ross (your new art director), he would look like "Prison Guy Jr." or "Mini-Me Prison Guy"? Perhaps this way Robert Capps can shake the image and fully assume the new "Beatnik Editor" role. Just look at that goatee! —S. E. EMRY

ALTERNATIVE ALTERNATIVES

Sorry to rain on your parade, Dave, but I noticed a glaring omission in your "Software Alternatives" feature (Nov/99, p32). You forgot the coolest Mac software of all. I'm speaking, of course, of Linux, in all its variations—LinuxPPC, MkLinux, YellowDog Linux. Linux comes with lots of cool stuff compiled for the PowerPC—Gimp instead of Photoshop, StarOffice instead of M\$ Office, Apache, KDE, Netscape, the list goes on.

I love the Mac OS to death, but until Mac OS X comes out, I want something I can actually *play* with, I dual-boot my 7600/120 between Mac OS 8.6 and Linux PPC, and it *never* crashes in either operating system. Let's see a Windows 98 box that can keep up! I love having a Wintel-free system! —MATT STENINGER

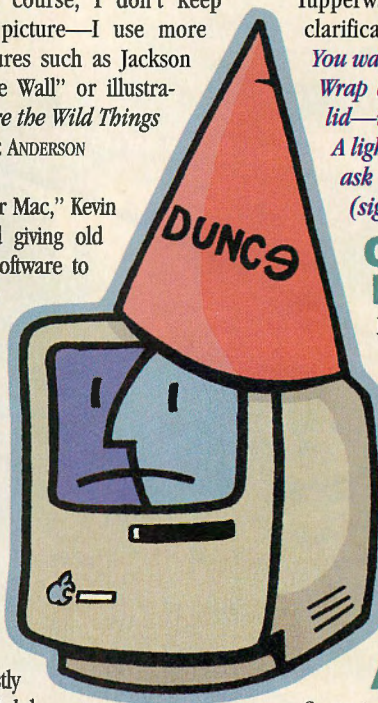


ILLUSTRATION BY DAVID "TWIG AND BERRIES" ROSS



GET ON,
GET ACTIVE.
Talk to us and
other Mac
addicts at the
Web site.

I am saddened that in your article about alternative software, you didn't include Corel WordPerfect in the word processing section—especially since I learned from your Web site that Corel was giving WordPerfect away free. Although I have only used this program for a little over a month, it has replaced Word 98 as my favorite word processor. Because it has such small system requirements, WordPerfect even runs on my PowerBook 180, which has just 4MB of RAM. WordPerfect's Grammatik puts Word's spelling check and thesaurus tools to shame, helping me become a better writer along the way. And while Word attempts to add features that end up as annoyances, WordPerfect's features are more useful than I could ever have imagined.—ZACH LUTZ

WE'RE NOT THAT WEAK

Here's a word search puzzle I made for you just in case you might be tempted to do some work.—PHIL WALKER

MacAddict

Y	R	R	E	B	W	A	R	T	S	F	I	R	E	W	I	R	E
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APPLESCRIPT
ASK US
BILL HA HA HA
BLUEBERRY
BONDI BLUF
CONTROL PANELS
CONTROL STRIP
DISK FIRST AID
EDITORS NOTE
EXTENSIONS
FIREWIRE

GET INFO
GRAPE
IMAC
INTERNET
LETTERS
LIME
MACADDICT
MODEM
OPEN TRANSPORT
POWERBOOK

POWERMAC
QUICKTIME
REVIEWS
SCRAPBOOK
SHERLOCK
SHUT DOWN
STEVE JOBS
STICKIES
STRAWBERRY
TANGERINE
WINDOWS HATER

MORE LIKE A CONSPIRACY

I was poking through my system file last night when I noticed that the mouse control resources are named *mcky*. Now, if that's a coincidence...—CHARLEY TISHMAN

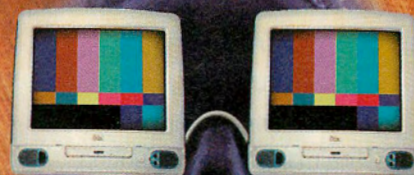
STOP, YOU'RE MAKING US FLUMMIGULATE!

I noticed that on page 77 of the October issue Mark Simmons used the word *embiggen*. I can't find that word anywhere in the dictionary. What does it mean? By the way, *MacAddict* is a perfectly cromulent magazine.—KEVIN ANDERSON

OUR WIRES GOT CROSSED

While browsing through the contents of the November *MacAddict*, I spy instructions for making a crossover cable in "Save Your Old Data with EtherTalk," p92. Yee-ha! I've been meaning to make one for years, but never got around to digging out the instructions. Now

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there they are, right in front of me! I grab an old cable, slice and splice away, connect two Macs, fire them up, and get the message, "There has been an error." Rats! Rechecking the directions, I find that you point out the correct wires, but the colors are wrong! It's the green wires, not the blue! With the correct connections, it works beautifully. I think Buz needs a ColorSync upgrade.—JEFF MILLER

This is why I love *MacAddict*—it's wacky but useful. When I got home with my new beige G3, I got to thinking about how I was going to transfer the gig of data from my faithful but tired 7100. Hmm...the cable company left me a spare 10Base-T Ethernet cable when it set up my cable modem...and here's a stroke of luck: *MacAddict* has just published instructions on how to save my old data with EtherTalk, along with instructions on how to make a crossover cable! Useful, timely, amazing...

Of course things got wacky (and a little frustrating, I must admit) when I connected the Macs with the modified cable (having followed the written instructions very carefully). You guys are a hoot! Challenging your readers to these games of troubleshooting improv! Well, it took a while, but I finally figured out your little secret and cut a few more wires in the cable to make the connections described in the visual instructions. All in all, it took me 30 minutes more to get the Macs talking to each other, but that was nothing compared to the 17 hours it took to transfer the data over the network connection. Thanks for the useful articles and irreverent fun.—DONALD JUBINVILLE

ANYTHING ELSE?

Has the hard time in thinking jail finally gotten to him? Why is he giving us full programs on The Disc? If he has gone mental, please keep him that way. I pay about \$30 a year for a subscription and I'm treated to hundreds of dollars worth of software! Next month, could you put Mac OS 9, Adobe Photoshop 5, Avid Videoshop, Macromedia Director Studio, and Poser on The Disc?—ANDREW T. SCHNICK

We now have to keep Prison Guy chained to his desk to keep him from giving away free G4s to all the readers. It's really quite sad. Thank you for your concern.—Ed.

WHERE WERE YOU?

You know, I was digging around in my *MacAddict* collection and came across the premiere issue. It was fun to look back and see the direction this magazine plotted out. I just received my latest edition, and I compared the two. The magazine has stayed on target through every issue. It never fails to amaze me how well done *MacAddict* is. You people clearly had a vision (gag on a corporate buzzword), and you haven't lost your focus since issue number one. While I've got you, what's been going on between issue number 1 and number 39?—CHARLES CUSUMANO

WW "WHAT THE?!" F

After a week of using my new Connectix Playstation emulator to play Human's Fire Pro Wrestling G, I decided to create the match every Mac lover dreams of: Steve Jobs kicking the crap out of Bill Gates! Using the game's editing tools, I re-created Jobs and Gates as closely as possible and took a few snapshots of the entire match. I wonder when I'll be able to see Jobs do a stunner like that on Pay-Per-View.—JAKE GONSOSKI



A BEHIND-THE-SCENES LOOK at negotiations between Apple and Microsoft.

BY JASPER, YOU'VE GOT IT!

I was experiencing a brief lapse in creativity while designing graphics on my G4, when a question suddenly came to me: What does *Pentium* mean? So I double-clicked my Oxford Dictionary and typed in "Pentium"—and to my dismay the definition didn't appear. But I did find information about the two roots of the word. *Pent* means five or fifth, and *ium* means pertaining to an element. From here you can follow two logical paths: Either Intel is truly confused and thinks its product is the elusive fifth element, or Pentium refers to the fifth element of the periodic table, boron. When I thought of the latter option, I immediately recognized the striking similarity to the word *moron*. And, as we all know, the definition of *moron* is anyone who would actually pay money for a PC with one of the previously mentioned inferior processors. Coincidence? I think not.—JASPER UPTON

YOU'RE, UM, MUCH BETTER OFF

I'm wondering if I should be miffed at Apple. In April, I purchased a G3 and got Final Cut Pro soon after. Now Apple has released iMacs with the iMovie app for editing video. I spent nearly \$5,000 for the ability to edit video via FireWire on a Mac, but now it seems I could have waited a few more months and spent a lot less for the same privilege. Please tell me the differences between iMovie and Final Cut Pro. Please tell me I'm much better off with my higher-end configuration.—STEVE SWIENKOWSKI
Check out Scrapbook on page 26 of this issue for a closer look at iMovie.—Ed.

CLICK 'N' A SNIT

Pssst...I just thought I'd enlighten you about Steve's clicker of power (*Scrapbook*, Nov/99, p30). He's not really advancing the slides. When he presses the clicker, a light and/or buzzer goes off backstage, and the guy sitting at the computer advances the slides—very likely in MicroShaft PowerPoint. (If it's not an Apple-paid event, it could be on a PeeCee!!!) There are several reasons for doing it this way:

1. The clicker could malfunction, and then the slides would not advance.
2. The computer could freeze, but since there are two running simultaneously backstage, the operator can switch to the backup system.
3. Steve might forget to click, but the producer could tell the operator to advance the slide.
4. Steve might click the reverse button by mistake, and look like an idiot who doesn't know how to operate a garage door opener.
5. Steve might click too many times, and look like an idiot who doesn't know how to operate a garage door opener.

Of course, the ultimate desirable outcome here is that Steve doesn't explode in a fit of rage for something that was his fault.

—RICK AHLGREN

DAVE TOOK A SPEED-WRITING COURSE

What are you guys feeding Dave? I was enjoying the November *MacAddict* when I noticed that most of the stories seemed to be by David Reynolds. He wrote three of the four features, two of three how-tos, and two of 17 reviews. I think he also had a text box in the *PowerPlay* section. In short, of the 61 pages with content, excluding the table of contents and letters, Dave was responsible for 30 of them. What's the deal—is Prison Guy getting a little revenge?—SCOTT GALLAGHER

I noticed in the November issue that you made David Reynolds write five articles. This seems kind of mean. Is it some sort of payback for when he was in charge and made you guys do all the work? Is it because he was drinking too much and you all tricked him into doing it? Or was it just some weird freak of nature?—BEN TERMEER

WILL WORK FOR KRIS

Please include more pictures of Kris Fong in all future issues. She is awesome! I am applying for the editor's position advertised on your Web page. Heck, I'll work for free if I get a desk across from hers.—SCOTT CURTIS

WE'VE SEEN WORSE

Is it just me, or does this worldwide DRAM shortage have anyone else envisioning life in the near future as a new postapocalyptic Mel Gibson film—*The RAM Warrior*? I'll leave the screenplay as an exercise for the reader's overactive imagination.—KRIS THOLE

AND THEY CALL THIS NEWS

Right in front of my disbelieving eyes, this appeared on the front page of *Section Two* in the *Wall Street Journal* (October 14, 1999) in Walter Mossberg's *Personal Technology* column: "Finally, a word of warning. Today's Windows 98 PCs are generally unreliable. They will crash on you, do unexpected and puzzling things, and generally create hassles and headaches. I know of no brand that is immune to these problems. So be prepared for more trouble than you deserve." It brought a tear (from laughter) to my eyes.—MARC ORCHANT

PURE JEALOUSY

Just out of curiosity, why is Max exclaiming "Holy crap!" as he lunges out from under the iBook on the October cover? I thought the iBook was a good thing. And why would it want to squish Max?—JENNIE E. CALLAS

TEEN ANGST

I really love your magazine, but why the hell did you make the guy from Matchbox 20 your editor?—SEAN VILLAFRANCA

YOU KNOW YOU'RE A MAC ADDICT WHEN...

...you introduce a controversial topic in your college class with, "Now I don't want to start a flame war, but..."—NICKOLAUS WING

...you have a nice, big house, but you'd rather live in a Power Macintosh G4 cardboard box ("Live Different").—CLAY CAMARDO AND KEI OTANI



The latest victim of San Francisco rent hikes.

...you refer to the beautiful redheaded country singer as Reba Macintosh.—CHRIS SEBES

...your brother is in Cub Scout Pack 604, and you encourage him to find Pack 450 (G4) and join it.—"POWERDEREK G4" HARMS



get info

It's a good thing these first-person shooters don't *really* make us violent.

My So-Called Half-Life

Sierra and Valve cancel Half-Life for the Mac

In case you've been stranded on a desert island (or just don't have Internet access), let us catch you up with the latest punch to the gut of the Mac-gaming community: The much-anticipated Mac version of the ultra-popular PC game Half-Life is, at least for the time being, dead. Valve Software (who originally developed the game) and Sierra (who publishes the game) told Logicware (who were porting over the Mac version) to stop work in mid-October, and shortly thereafter Valve issued a letter of apology to the Mac community for canceling the project. The reason the company gave for shutting down Mac Half-Life was that economic factors would make it impossible to keep Mac development and updates at the same pace as those for the PC. Rather than treat the Mac community like a second class citizen, Valve decided to not treat the Mac community at all.

Logicware lead programmer Bill Heineman said he was stunned by the decision to cancel the game, and by Sierra and Valve's reasoning. Heineman said that Logicware had just completed a full working beta of the game and expected to have the final build ready to ship in November. Especially surprising, Heineman said, was Valve's indication in its letter that the Mac and PC versions of Half-Life would be unable to network via the Internet for multiplayer games. According to Heineman the game was already networking fine with version 1.13 of the PC Half-Life (the latest PC build) on LAN and over the Net, and all that remained to be done was bug fixing, some optimizing, and tweaking of some Macintosh-specific features. Heineman also disagrees that a successful business can't be had by selling Half-Life on the Mac. In fact, his company as well as Aspyr Media and MacSoft have showed interest in purchasing the Mac rights to Half-Life, but Sierra has not officially responded.

The company has unofficially said that a licensing deal is probably unlikely, though.

Sierra spokesperson Genevieve Ostergard explained that one reason for canceling the game was poor sales figures on Sierra's other Mac games—Caesar III in particular. Ostergard pointed out that even though Caesar III has received rave reviews and heavy promotion, it has sold less than 10,000 units to date. On the PC side, Caesar III has currently sold around 450,000. Best selling Mac games such as Civilization II, a top seller for months and months, only sell around 60,000 Mac units, while it's not uncommon for a popular PC title to sell over a million units.

Being a Mac gamer herself, Ostergard said she is also disappointed that Half-Life will not be coming to the Mac, but as a business decision, she understands it.

"How can we justify being [a Mac] business with those numbers?" Ostergard said. "60,000 units should be considered a failure."

Low sales, Ostergard feels, is not necessarily caused by the relative small size of the Mac market—with over two million iMacs sold, there should be a market for a game to sell half a million copies on the Mac. The real problem as she sees it is that people still don't think of the Mac as a gaming machine, and Apple still has a long way to go in evangelizing games on the Mac. On the PC side, hardware manufacturers and graphic accelerator card makers, such as 3Dfx, work in conjunction with game companies to generally promote gaming. On the Mac side, gaming companies are left on



Dining at Ambrosia

their own except for Steve Jobs's occasional keynote mentioning. (Apple didn't return phone calls on the subject.)

Ostergard told us that has far as she knows, Sierra is still moving forward on its other Mac titles such as Pharaoh and Tribes II, but the company is in the process of reevaluating its Mac strategy, so production could halt at any minute. Even though she has a point that a company should be able to see higher unit sales from a blockbuster title, we still feel that part of the problem with Half-Life is still that Sierra's sales expectations are a little overblown. Smaller companies such as Aspyr and even Macsoft have proven that a business can be successful by bringing big PC titles to the smaller Mac market. Aspyr had to make large financial guarantees (although it's not telling how big) for Tomb Raider II, but according to founder Mike Rogers, Tomb Raider broke even in its first three weeks. Perhaps the Mac market is too small for a company as big as Sierra right now, but no one has made a compelling argument for Sierra's refusal to take money from a company that thinks it can make Half-Life a success on the Mac.—RC

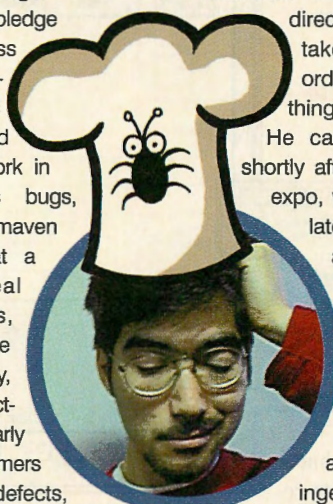
Less pleasant than it sounds

Hardly a software company in existence doesn't claim to take bugs seriously. Most companies spend a lot of effort testing their software (Microsoft has even managed to use beta testing as a source of profit). Now, Macintosh gaming stalwart Ambrosia Software has gone one step further: It has promised to eat its own bugs.

Ambrosia made the pledge in a late-August press release: For every application Ambrosia releases between August 1999 and Macworld Expo New York in July 2000 that contains bugs, company marketing maven Jason Whong will eat a course containing real insects. Two products, Cythera and Ares, have already turned out buggy, so he will eat an insect-laden salad and a similarly infested soup. As consumers find further product defects,

Whong plans to continue with an entree and, if necessary, a dessert. To make the insects a bit more palatable, Whong has purchased *The Eat-A-Bug Cookbook* by David Gordon, which contains a variety of appropriate recipes.

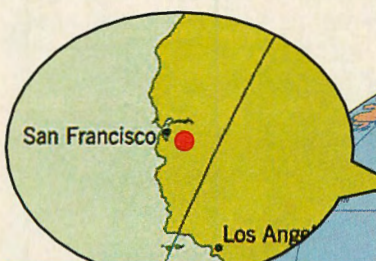
While it might seem strange that Ambrosia would punish its marketing director for its engineers' mistakes, Whong considers the ordeal fair; after all, the whole thing was his idea to start with. He came up with the concept shortly after the July 1999 Macworld expo, when he ran across chocolate-covered grasshoppers in a catalog. After making the obvious connection between real and virtual bugs, Whong went ahead with the press release August 19, 1999. We'll provide continuing coverage as bugs—coded or ingested—warrant.—JS



Where's the Holdup?

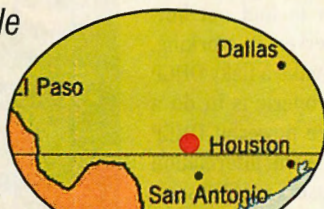
Bad luck on a global scale

Apple ran into some snags in its distribution of Macs in October, resulting in significant delays of its three new product lines. The delays resulted from a combination of problems around the world. Here's where the most significant problems occurred.—JS



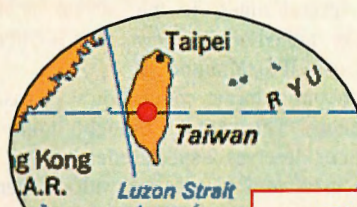
CUPERTINO, CALIFORNIA:

Apple took some risks in announcing the availability of its latest computers before it had built enough to fill the channel. The risks initially paid off by focusing media attention on Apple, but left the company vulnerable to embarrassment when unexpected delays occurred.



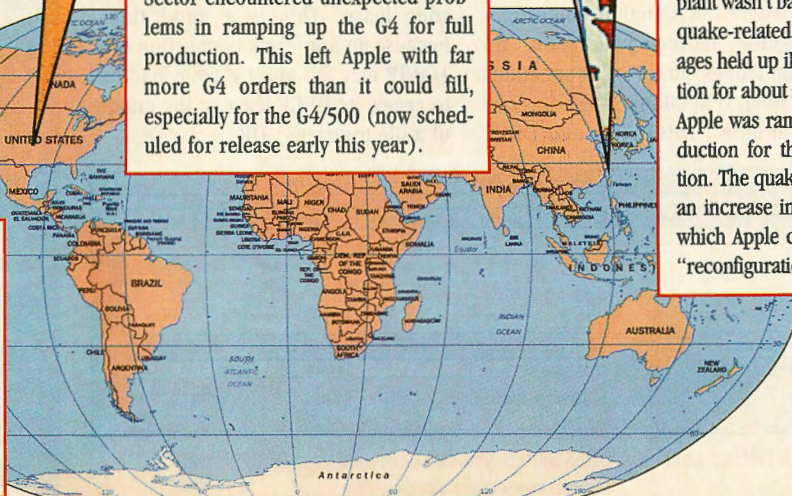
AUSTIN, TEXAS:

Motorola's Semiconductor Products Sector encountered unexpected problems in ramping up the G4 for full production. This left Apple with far more G4 orders than it could fill, especially for the G4/500 (now scheduled for release early this year).



TAIWAN:

A 7.6 earthquake struck Taiwan on September 21, killing well over a thousand people. Apple subcontracts iBook construction to a Taiwanese firm—although the plant wasn't badly damaged, quake-related power outages held up iBook production for about a week just as Apple was ramping up production for their introduction. The quake also caused an increase in RAM prices, which Apple cited in its G4 "reconfiguration."



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Shareware Pick of the Month

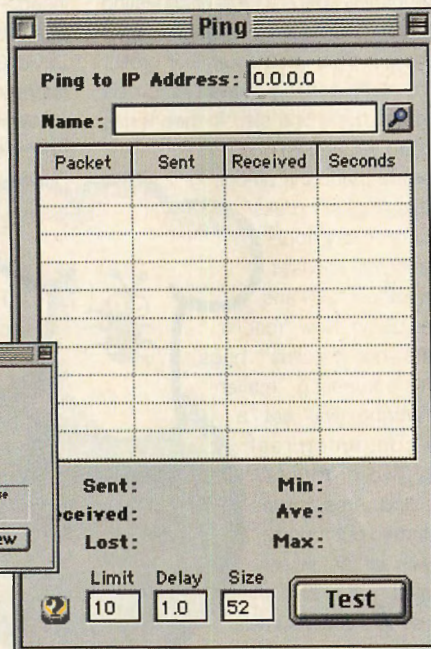
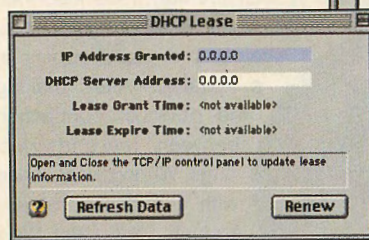
IPNetMonitor

SHAREWARE FEE: \$20

URL: <http://www.sustworks.com>

REQUIREMENTS: System 7.5.3 or later, Open Transport 1.1.1 or later

IN THEORY, it's like a car lease—you get your wheels for a limited amount of time.

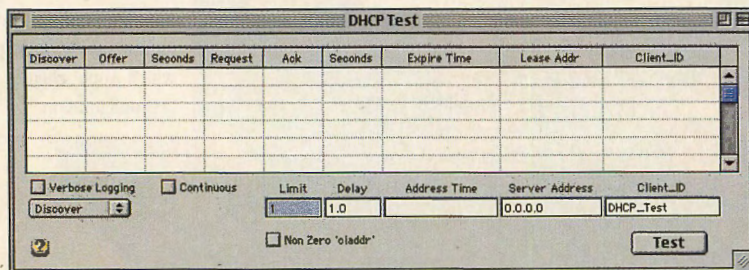


A SIMPLE PING to a friendly server (either by IP address or by name) will do the job of testing your TCP/IP connection.

IPNetMonitor is an oldie but a goodie in the Mac shareware community—we have written about it several times. In the past, we've talked about how you can use IPNetMonitor to check out your Internet connection's performance. This time, though, IPNetMonitor deserves a special mention as a great tool for dealing with flaky DHCP connections (DHCP is a scheme in which a server autoassigns IP addresses, allowing IP networks to set themselves up without a system administrator doling out numbers). The popularity of cable modems and DSL connections is growing, and both often use DHCP to assign IP addresses. That's where IPNetMonitor comes in.

Besides letting you look up domain names and test connections with a ping, IPNetMonitor also has two DHCP utilities: DHCP Test and DHCP

Lease. With DHCP Test, you can use one of several tests to find out how well your DHCP server is working. Often all it takes to make a flaky DHCP connection work properly is to do a DHCP test. The more powerful DHCP Lease provides you with information about your DHCP lease. (A DHCP server leases you an IP address for a certain amount of time.) With this, you can find out when your IP address lease is about to expire, and renew your lease. This is a good thing, because an AppleTalk connection over TCP/IP may fall apart if your Mac has to renew its DHCP lease in the middle of a file transfer.—DR



WITH A SIMPLE push of the Test button, you can check out your DHCP server.

New for the Mac

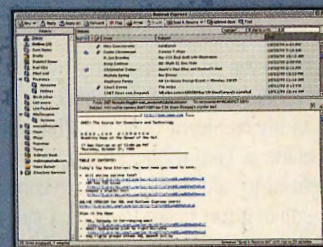
Outlook Express 5

Microsoft

425-882-8080, <http://www.microsoft.com/mac>

Free (on The Disc)

Okay, so stop the boos and hisses already. It's from Microsoft, and it has some pretty cool features, including multiple account support, a junk mail filter, access to Hotmail accounts, and a revised user interface. Plus, the new Outlook Express has an advanced search function and a host of other user interface tweaks that make it worth a test drive.



SPORTING A NEW SET of icons, Outlook Express is a mail client you wouldn't mind taking out to meet the folks.

Digital Media Remote

Keyspan

<http://www.keyspan.com>

\$79

Finally—a bit of hardware that connects your USB-equipped Mac to a remote control, letting you use your Mac as a component in a home entertainment center. Dubbed the Digital Media Remote, this infrared remote and USB infrared receiver plugs right into your Mac and lets you control the QuickTime player, SoundJam, RealPlayer—even PowerPoint and the Finder.

MVP

QDesign

<http://www.mvpsite.com>

\$19.95 (demo on The Disc)

You thought MP3 files were small—that is, until QDesign happened on the scene with MVP. MVP not only handles MP3 playing and decoding, but it also features the QDesign encoder, which promises to deliver 60:1 audio compression with great sound quality. And since QDesign is a member of the Secure Digital Music Initiative, MVP won't suffer the same pirating stigma as MP3.—DR



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OS 9 Esoterica

Small changes add up for OS 9

Last month, we told you about some of the big, flashy new OS 9 features. Lest you think these are the only changes OS 9 brings, this month we'll tell you about some of the small things that make OS 9 worthy of its single digit.

- The Finder can now copy and otherwise handle files over 2GB. The maximum file size is now 8 exabytes (1EB is just slightly over a million terabytes).
- The maximum number of open files has increased to 8,169, from 348. Though 348 may seem like a lot, the Finder keeps many files open constantly—by the time it launches, the Finder has opened over 100 files.
- Programs can no longer directly access the underlying structures in File Manager. Apple had to make this change, which has caused many incompatibilities with third-party software, in order to allow the number of open files to increase.
- OS 9 corrects a font-corrupting bug in 8.6.
- The new OS offers improved USB support, including support for generic speakers, microphones, and network devices.
- Improved multitasking support means preemptive threads can now issue file system and device commands. (Jargon translation: Well-written apps can do a much better job of twiddling with files in the background.)
- Mac OS now supports cursors bigger than the traditional 16 by 16 size, as well as animated cursors.
- Drive Setup now has presets for many non-Mac OS drive types, such as Linux, Darwin, and Mac OS X. This will help folks who use the same system for both Mac OS and a Unix variant.
- Passwords appear as bullets instead of as readable text when you're adding users.—IS

The Casting Call

*Be a fashion victim—
let us mold you!*

Calling all victims of low self-esteem, five-dollar haircuts, and rocky road complexions! Whether you're simply having a bad hair day or feel like you need a complete do-over in the looks department, we can help you. After instituting our new Appearance Really *Is* Everything policy, we realized that you, our dear readers, directly reflect the magazine. And then we thought, we certainly can't let you go around looking like that!

So send us your tired, your poor, your huddled masses yearning to...um, just send us your photos. Mail them to MacAddict Makeover, c/o Ian Sammis, 150 North Hill Dr., Brisbane, CA 94005. Include your name, address, phone number, and email address, as well as a brief explanation describing exactly what you don't like about your looks. If we don't like what we see, we'll do our digital best to fix you up with Photoshop. All willing participants that we decide to...um...help will get your *before and after* pix printed in the magazine, as well as a safety kit of Photoshop tips to create your own emergency makeovers at home.—NE

Farewell to old friends

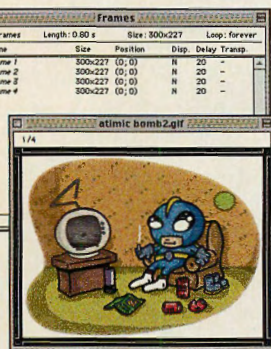
Development ceases on GIFBuilder and clip2gif

It's always heartbreaking to get news of an old friend passing. Longtime Mac Web site developers may need to reach for their hankies: Yves Piguet has ceased development of his wildly popular freeware applications GIFBuilder and clip2gif. Although the programs' popularity remains almost undiminished, (Download.com reports that GIFBuilder remains in the top 50 Mac downloads), Yves's focus on new projects and uncertainty over the GIF standard have conspired to doom the applications.

GIFBuilder is one of the oldest and best Macintosh applications that allows Web site designers to create animated GIFs, the little animations that pervade the Web. First released in 1995, just as the Web's popularity was taking off, GIFBuilder quickly became one of the main tools for GIF Animation (in one particularly ironic case, it was noticed that GIF

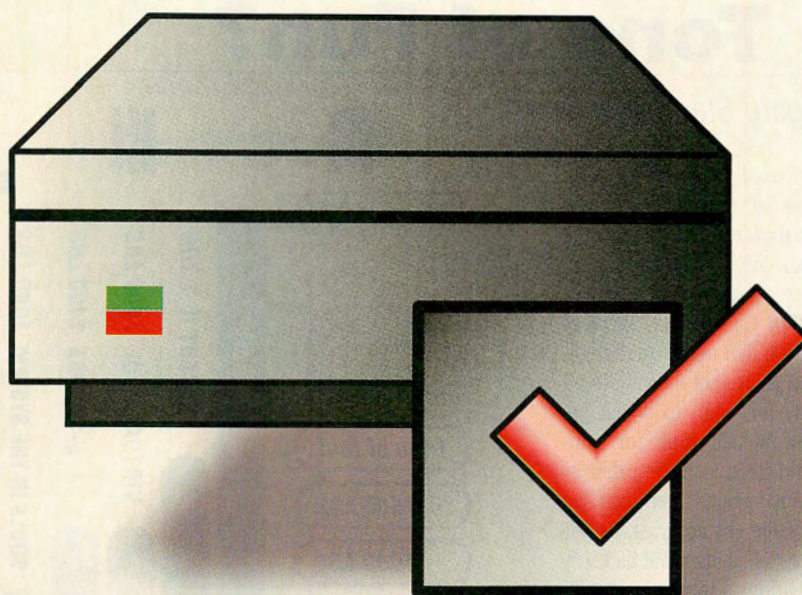
animations on Microsoft's home page bore GIFBuilder's stamp). Although GIFBuilder has recently been largely superseded by commercial applications (Adobe's ImageReady, for example), most Web designers still have a warm place in their hearts for the old warhorse.

Piguet decided to officially stop development for two reasons: to focus on his new, much more ambitious project SysQuake (gamers who rush to <http://www.calerga.com> based on the name will be profoundly disappointed—it's a systems analysis package) and because of concerns over the fate of the GIF format. GI Fuses a compression algorithm proprietary to Unisys (<http://www.unisys.com>), which has become increasingly energetic in pursuing what it considers violations of its patent rights in recent years. Rather than deal with possible legal repercussions (a rather daunting task for a freeware developer), Piguet decided to simply cease development. GIFBuilder and clip2gif will continue to be available from all the usual download sites.—IS



THE GIFBUILDER INTER-FACE is familiar to the vast majority of Mac-based Web site developers.

There's only one utility in the world that does more for your Macintosh than TechTool Pro 2...



...Introducing TechTool Pro 2.5.2

MicroMat's disk repair and Macintosh troubleshooting utility just became a whole lot better. Now loaded with new features like Check Drive, which allows you to preview drive repairs before committing changes to your disk. Or the new Rebuild Directory feature that lets you manually optimize and repair drive directories, which not only makes your Macintosh run smoother but makes drive access noticeably faster. TechTool Pro 2.5.2 also now supports new technologies like System 9, "Pure" HFS+, all of the latest Macs and much more. But the real power of TechTool Pro 2.5.2 isn't in the

features you can see, it's in the features you can't see. Like a multitude of new drive repair routines that can save data that other utilities would simply abandon. An improved recovery system that will find lost files in the darkest caverns of a damaged drive. You'll also find improved performance on key features like disk optimization. But maybe the feature you'll find most interesting about this version is the price: FREE*. If you own any prior version of TechTool Pro 2, just go to our web site and grab the updater**. You'll be glad you did.

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* Version 2.5.2 is available at no charge to registered TechTool Pro 2 users as an updater application directly from the MicroMat web site. If you do not wish to download the updater or would prefer a new CD, they can be purchased for \$25 plus tax, shipping and handling by calling the phone number above. Please have your serial number ready when calling. Prices subject to change without notice.

** Version 2.5.2 is scheduled to be released when Apple releases System 9.

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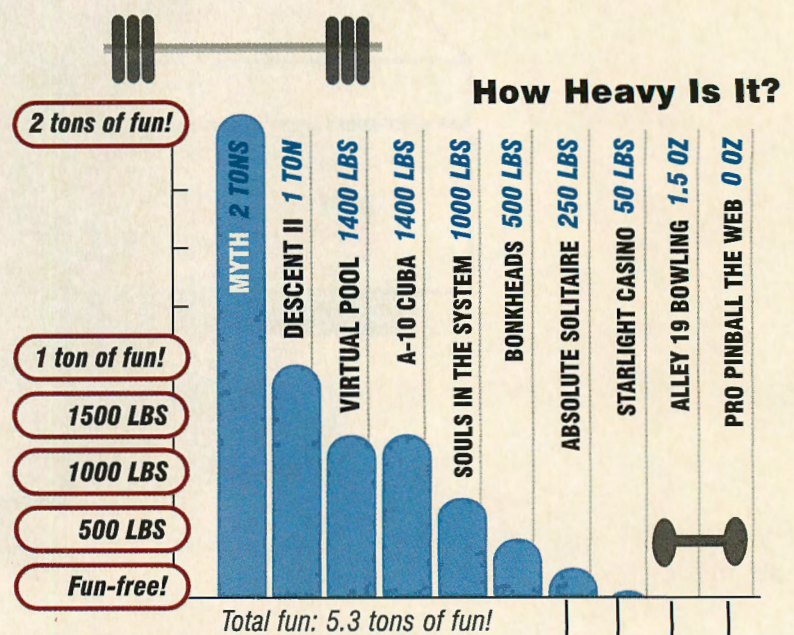
get info

Ten Tons of Fun?

We investigate StarPlay's claims

We've gotten used to them by now, those packs of four to six aging games that lurk in dark corners on even the most meager shelf of Macintosh games. Still, when StarPlay production released its latest collection, Ten Tons of Fun, we were curious. The five CDs that make up the collection have a total volume of only about 67 cubic centimeters; for them to weigh ten tons (we assume metric tons for simplicity), they would need to have a density of almost 150,000 grams per cc—an almost ludicrous value (by contrast, lead is just over 11g per cc). This would clearly represent a tremendous advance in materials science! To our disappointment, we could easily lift the box, and a quick check on our postal scale confirmed that the CDs weighed a total of just 68g.

Clearly, the cited figure of ten tons must refer to some strange connection between mass and entertainment with which we were unfamiliar. Although we couldn't be certain, we tried to estimate the actual weight based on the clear fact that Descent II is a ton of fun. To our best estimates, the name of the collection is a serious exaggeration—the pack contains only slightly over five tons of fun.—IS



The Featherweights

ABSOLUTE SOLITAIRE	A decent solitaire game, but you can find better shareware games than this.
STARLIGHT CASINO	Straightforward casino game manages to be less impressive than the 1984-era MacCasino.
ALLEY 19 BOWLING	Bowling sim is incredibly buggy—it's hard to get the ball out of the return chute, much less actually bowl.
PRO PINBALL THE WEB	Time has apparently passed this one by—the program consistently locked up our machine on startup.



Acrobat Graduates from Clown College

Plug-ins bring Mac Acrobat up to Windows parity

A few months ago, Adobe announced (with great fanfare) Acrobat 4.0—the latest and greatest version of the universal document creator. Acrobat has several cool new features, including Web Capture (the ability to save Web pages or sites as PDFs), Digital Signatures (for secure PDFs) and the ability to compare two or more PDFs to see changes. There was a sticking point, however: Those features were only available for the Windows version, not the Mac version. So, to express our discontent, we promised to call version 4.0 Adobe Clown (instead of Adobe

Acrobat—sense the circus theme?) until Acrobat made Mac and Windows versions equal.

Well, that happy day has arrived. Adobe has released a set of plug-ins that will bring the two versions back together, allowing us to say (while fighting back emotions) that Adobe Acrobat is back. Right now, the plug-ins are only available in beta form, but Adobe is working hard to make sure that they're finished soon. If you want to download the plug-ins or information about them, just go to <http://www.adobe.com/products/acrobat/acr4diff.html>.—DR

ILLUSTRATION BY MIKE GORMAN

Mac Connect.

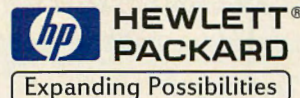
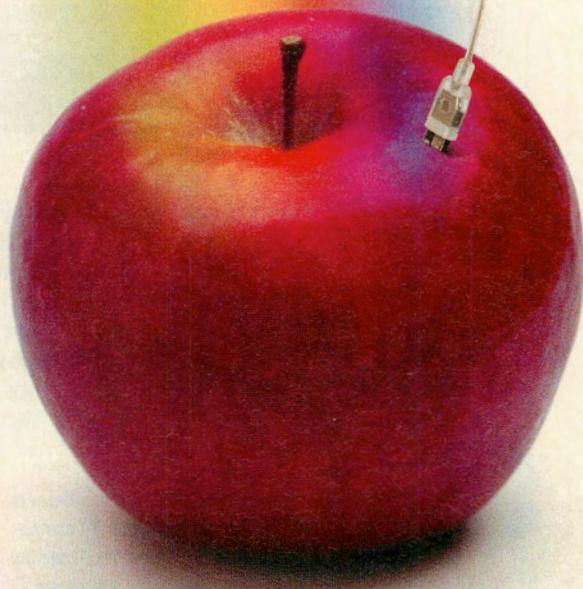


Introducing the Color Connection from Hewlett-Packard! Our newest industry leading "Mac Connect" solutions allow you to easily connect a variety of HP color printers to USB-ready Macintosh computers, including the new iMac – in the blink of an eye!

HP has long been the leading provider of Macintosh peripherals connecting more printers to Macintosh than any other company. The new lineup includes the HP DeskJet 800 and 900 Series models. Hewlett-Packard's PhotoREt color layering technology delivers the optimum combination of print quality, print speed, and great image quality on a wide range of media. You'll also experience the benefits of HP's unparalleled level of quality service and support.

So don't delay, we're "Mac Ready", so you can get "Mac Connected" today! For more information about HP's "Mac Connect" products visit www.hp.com/go/mac-connect

*Have fun choosing
"Mac Matching" printer lids
from a variety of "flavors"!*





scrapbook

The key to a good movie is a good script—oh, and lots of money.

EZDV

by Robert Capps

The iMac DV's bundled iMovie application has suddenly put thousands of new Mac owners face-to-face with their own incredibly underdeveloped movie-making skills. Jokes about would-be Spielbergs may not have the same resonance after you make your own backyard monstrosity, but at least iMovie makes it easy to assemble. Here's a closer look at Apple's intuitive new DV-editing app. (You can purchase a FireWire-capable DV camera separately.)

Monitor

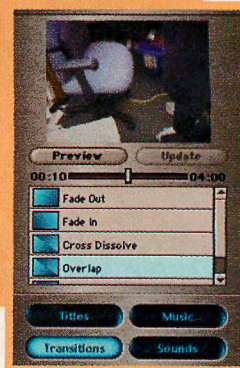
The main window in iMovie is reminiscent of the new (and some say darn ugly) QuickTime interface. Intuitively enough, this is where you watch clips play—from Shelves, in the timeline, or while you're importing them from your DV camera.

Shelving

When you import clips from your camera, they get stored in these little bays, called *Shelves*. You can keep a maximum of nine clips at a time here, but as you drop a clip onto the timeline it disappears from its Shelf, making room for another clip.

Palette

Clicking these buttons brings up the palettes for controlling titles, music, transitions, or (provided) sound effects. For transitions and titles, iMovie offers a quick preview window of what a title effect or transition will look like on a selected clip. For music, you can pull a track off your favorite CD.



Scrubber Bar

This bar represents the length of the clip in the window above. To trim a clip before placing it in the timeline, you must Shift-click this line and select part of it to delete. There are no traditional in and out points in iMovie.

Clip Viewer

To put together a movie, just drag captured clips from the Shelves to the clip view. Put clips in the order you want, lay in the transitions and titles, and you're ready to go. You can drop clips (or transitions, for that matter) before, after, or between other clips.

Free Space

Because iMovie works with clips at full screen size and frame rate, adding no extra compression, it creates *big* files. This handy-dandy bar lets you know how much of the iMac's hard drive you're sucking up while you work.



Camera Control

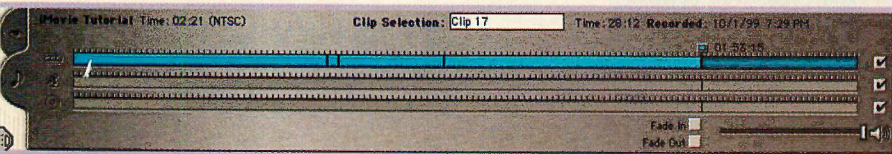
These buttons toggle the main window between Capture mode (which controls your DV camera) and Editing mode. In Capture mode, you'll see the all-important Import button, which tells iMovie to record what your camera is playing.

Audio Control

To expose the audio timeline for adding sound effects and music, just click the note icon.

Transitions

To add a transition to the timeline, simply drag it from the Transitions palette and place it between the clips you want to merge. It will take a few minutes to render (a red progress bar appears along the bottom of the transition icon). Then you'll have a smooth fade (or dissolve, or overlap, or whatever.)



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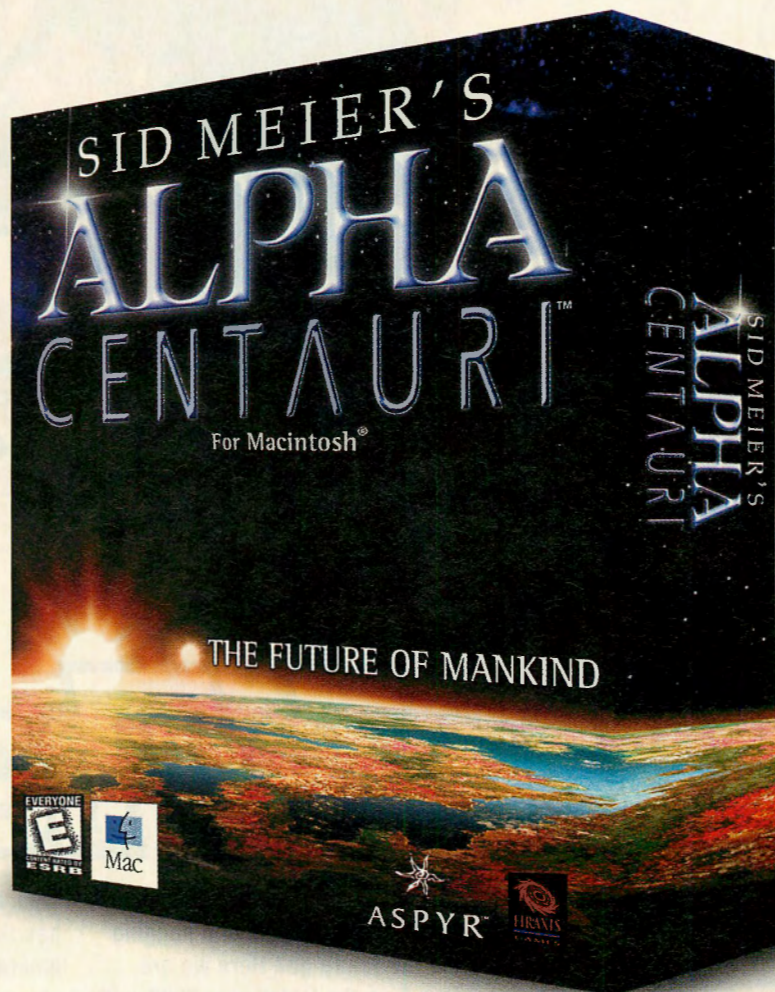
- PC Gamer

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Keep It Up,
Relax, Solar
System Icons,
Space Icons,
Starfield
Creator,
TitleTrack CD
Player, Uli's
Moose, a
Timbuktu Pro
trial, and
demos of
Sundial and
FlashBack.



Illustrations by Nathan Jurevicius

by Mark Simmons

Mac To The Future

Standing on the very doorstep of a new millennium,* it's hard to avoid asking ourselves one nagging question: Where did the future go? Here we are, mere weeks and days from the fabled year 2000, with nary a jetcar or a home genetic engineering kit to show for it. For all the technological advances of the last couple of decades, it looks like the 21st century isn't going to be the planet-hopping, robot-packed futuropolis that science fiction tradition led us to expect.

Well, as it so often does, the wonderful world of Macintosh has the cure for what ails you. In the state-of-the-art innards of the Mac OS, in the ever-expanding universe of shareware and third-party gadgetry, and in the nanoscopic crevices of your very desktop lurk all the whiz-bang sci-fi contrivances the most ardent futurist could ever wish for. Redshift those blues away, buckle up your rocket pack, and take off with us on a thrill-packed voyage into the world of tomorrow—today, right here on your Mac.

21 Techno-Thrills Right Out of the 21st Century



Or on the doorstep of the year before a new millennium, for sticklers.

Boldly Go Where No Mac Has Gone Before

future

4 Spaced-Out Schemes to Explore the Cosmos from Your Desktop

Encounter Alien Intelligence

Is there anybody out there? You may be the first to find out, thanks to the much-hyped (by us, at least) [seti@home](http://setiathome.ssl.berkeley.edu) (free, <http://setiathome.ssl.berkeley.edu>). For those of you just joining the alien-hunt now in progress, this exercise in distributed computing harnesses the power of your idle CPU to help digest radio telescope data from the Search for Extraterrestrial Intelligence. A bit closer to home, you can commune with a totally alien species by simply installing a Windows 98 emulator from Connectix (Virtual PC with Windows 98, \$179, <http://www.connectix.com>) or Insignia Solutions (SoftWindows 98, \$169, <http://www.insignia.com>). Just don't blame us when it takes you over and devours your brain.

Travel Near Light Speed

Ever since that killjoy Albert Einstein declared the velocity of light to be the universe's absolute speed limit, the finest scientific minds have applied themselves to the task of weaseling around this barrier. Now, with the arrival of the supercomputer-level PowerPC G4 processor (technically the MPC7400), Apple likes to claim that it's pushing the boundaries of light speed. Since gigaflops don't have a physical dimension, it's hard to make a velocity comparison. But it's worth noting that a 500MHz Power Mac G4, with a theoretical ceiling of 4 billion floating-point operations per second, can potentially perform a calculation in less time than it takes a ray of light to travel three inches. Think about that next time someone tells you we'll never break the 186,000-mph mark.

Build Your Own Galaxy

After turning back time and breaking the light barrier, how better to push the boundaries of speculative fiction than to blasphemously create your own galaxy? It's easy enough with Andrew Lee's Starfield Creator (http://www.geocities.com/drew_drew.geo/starfield.html), a cool shareware widget that generates random nebula-spangled starscapes you can export in PICT format. If you'd rather think small, you can instead just populate a desktop solar system with some of the many available sets of pretty-looking planet icons. The Iconfactory's Space Icons (free,

YOUR
HEADQUARTERS
FOR MARTIAN
INVASION, courtesy
of the gang at NASA.

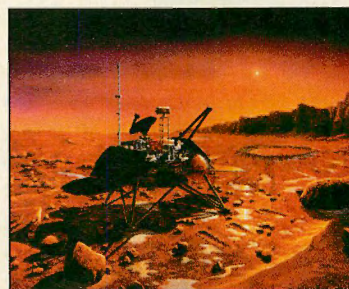


DRAW YOUR OWN VOID VISTA with Starfield Creator's randomized tools.

<http://www.iconfactory.com>) and Reby Lee's 32-bit Solar System Icon Set (free, <http://www.hk.super.net/~rebylee>) make particularly good planetary construction kits. Enjoy your cosmic tinkering, you futuristic Mac addict, you!

Attack Mars!

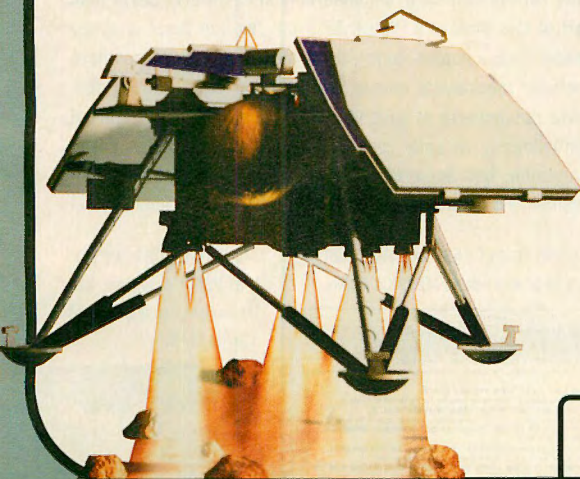
After steering the Mars Pathfinder mission's robo-buggy over the Internet, we've all been looking forward to the next example of NASA's participatory approach to planetary exploration. Well, the next visit to the red planet is coming up fast, with a couple of surveyor probes in Martian orbit as you read this and a stationary Polar Lander scheduled to hit the ground on December 3. With its tripod legs, claw arm, and insectoid body, the Polar Lander



ADD A HEAT RAY TO THAT CRANE ARM, and we're ready to kick some Martian...uh... whatever they have.

bears more than a passing resemblance to the Martian war machines of H.G. Wells; will our neighbors assume they're being invaded and react accordingly? Tune in to <http://mars.jpl.nasa.gov> for the latest developments.

Mark Simmons set his system clock to December 31, 1999, while writing this feature...but that's as far as he dares to go.



Better Living Through Macintosh

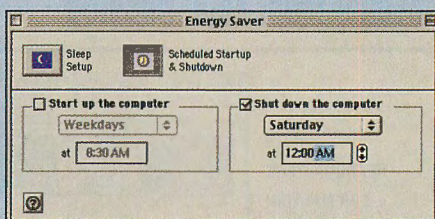
3 Ways to Live a Thoroughly Futuristic Lifestyle

The Y2K Blackout

Of all the prognostications people have made regarding the 21st century, it's obvious which will be put to the test first. Survivalists and naysayers may be confounded if global darkness fails to fall at midnight on December 31, but you can make a little piece of this prophecy come true by setting your Mac to shut down abruptly at the close of the millennium. At some point during the last week of December, go to the Energy Saver control panel and set it to shut down at 12 a.m. on Saturday morning (December 31 being the preceding Friday). It's unlikely that you

or any gullible friends will be hanging around your Mac at the chosen hour, but you'll at least have the quiet satisfaction of knowing that somewhere, the lights are going out...

APPLY THESE SETTINGS in the last week of December, and do your bit to make those Y2K warnings come true.



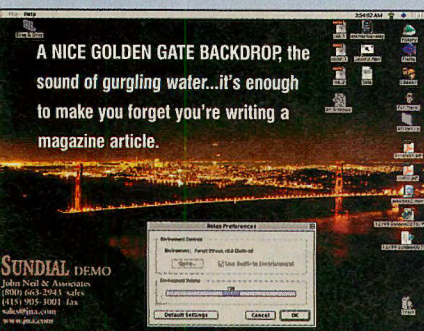
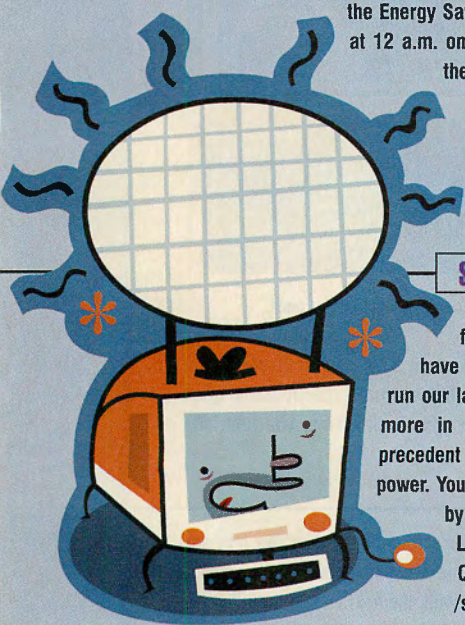
Solar Power

Since the world's supply of fossil fuels is finite, the day will surely come when we'll have to turn to alternative energy sources to run our laptops. While atomic portables would be more in genre, there's ample science-fictional precedent for the ecologically sound option of solar power. You can live this 21st-century lifestyle today by outfitting your PowerBook with a Power-Line Sun Catcher Professional from PowerQwest (<http://www.powerexperts.com/solar.htm>). These mobile solar arrays, which start at \$395, will liberate your laptop from its umbilical connection to your local coal-burning power plant—that's so Industrial Revolution.

All Aboard the Holodeck

There's more to desktop virtual reality than navigating through QuickTime VR panoramas. Just as sci-fi heroes use VR technology to escape their soulless environs and reconnect with the natural splendor long since exiled to *Silent Running*-style orbiting dome ships, you can generate your own rustic simulation to create the illusion that

you're crunching spreadsheets beside a babbling brook in some sylvan glade. Both Sundial (\$29.95, <http://www.jna.com>) and the AppleScript-based TiDes (\$5, <http://www.sover.net/~media>) can update your scenic desktop picture over the course of the day to reflect the current conditions in the outside world, while Relax (\$15, <http://www.sperspect.com>) supplies a variety of soothing audio accompaniments.



Trends of

3 High-Tech Fads You Can Embrace a Couple of Decades Early

The Universal Jukebox

If you're groaning at the prospect of upgrading all your VHS tapes and laser discs to DVD, and wondering what they're going to replace music CDs with next year, take heart. In the high-tech world of tomorrow, physical storage will become a thing of the past, with all your infotainment needs met via satellite broadcast. You can preview the possibilities by tapping the vast knowledge of the online CDDB database with a music player like RiverSong InterActive's TitleTrack (\$25, <http://www.titletrack.com>) or the Java-based InCDius GH (free, <http://www.genhelp.com>); the CD itself may be local,



TODAY THE TRACK TITLES, tomorrow the songs—orbiting jukebox satellites will beam all of it right to your Mac.

What's Hot, What's Bot

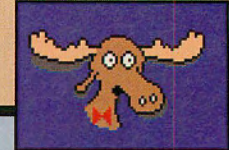
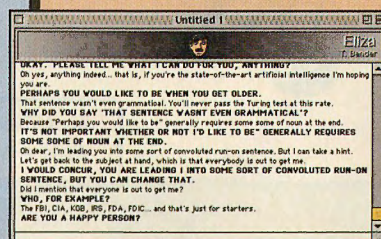
5 Creative Plans for Bringing the Robot Revolution to Your Mac

Artificial Intelligence

Nobody knows for certain where the dividing line lies between mere simulated banter and genuine artificial intelligence, but it's pretty certain that Eliza, the venerable simu-shrink, falls a little short of this threshold. While Eliza (\$5, on The Disc) is surely cheaper than a human therapist, its algorithmic responses have a definite mechanical quality. On the other hand, the fortune-cookie randomness of UII's Moose (free, <http://www.weblayout.com/witness>), recently resurrected in a new PlainTalk-based incarnation, has acquired an enigmatic quality that may well foreshadow the emergence of genuine computer intelligence. Let

IT'S HARD TO GET PAST THE FACT that Eliza's AI is as thick as MST3K's Gypsy.

ULI'S WISECRACKING MOOSE, by contrast, has a certain nonsequitur wit going for it.



TOMORROW!!!

but the disc info and track listings download from a centralized data source. You can consider this a foretaste of our plugged-in future, like the proliferation of Internet radio stations and Apple's QuickTime TV network.

Video Phones

Isn't it about time to bring on that videophone revolution we used to hear so much about? The desktop videoconferencing boom has been going for a few years now, and the advent of affordable high-speed connections gives us even more incentive to phase out voice communications in favor of grainy postage-stamp-size CU-SeeMe feeds (\$89 from White Pine Software, <http://www.wpine.com>). And with faster Macs capable of digitizing QuickTime video in real time and streaming it out to the world, the line

between videoconferencing and full-bore Web-casting is getting pretty blurry.

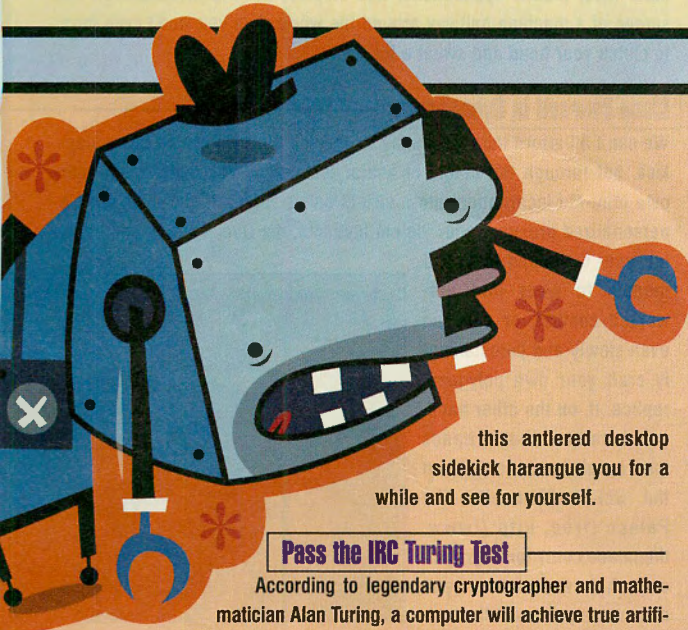
Metric Madness

Naturally, in the future we'll be forced to eschew all these pounds and ounces and feet and inches and hew to the decimal discipline of the metric system. But thus far, even the most orthodox of metric advocates has clung to an archaic timekeeping system based on hours, minutes, and seconds. Well, that's no longer the case. The latest development in well-intentioned futurism is a metric time system, which divvies up each day into a thousand "beats" (each 86.4 seconds long). There are still a couple of feuding synchronization standards, but the free metric clock mBeat (Catara Software, <http://www.grapevine.net/~catara>) lets you hedge your bets by toggling between 'em.



09.21.1999 @898

IT'S TIME TO GET METRIC, but will they ever pick a standard meridian?



this antlered desktop sidekick harangue you for a while and see for yourself.

Pass the IRC Turing Test

According to legendary cryptographer and mathematician Alan Turing, a computer will achieve true artificial intelligence when it can hold up its end of a conversation well enough to pass for a human being. If so, then Internet Relay Chat offers a perfect testing ground for your prototype AI. Using a scriptable IRC client like Ircle (\$15, <http://www.ircle.com>), you can devise an AppleScript that analyzes the text of the console window and dispatches an appropriate response. Throw in a repeat loop, and your script can watch the progress of an online discussion and throw in its artificially intelligent two cents.

Robot Houses

As we've demonstrated in our occasional forays into home automation (most recently in "Command Your Mac," May/99, p36), you no longer need to be Bill Gates to live in a robot house. Thanks to the magic of the David Reynolds-approved X10 system, you can turn your Mac into a central control station for everything from mood lighting to toasters.

A CRUDE SAMPLE of an automated IRC response. And we do mean crude.

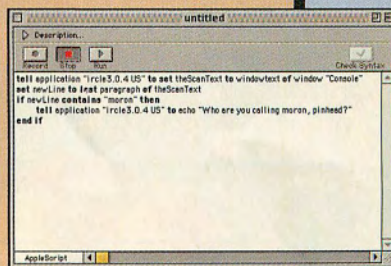
One day, positing the availability of high-quality image-analyzing software for your sentinel Webcams, you may even be able to autoactivate your lawn sprinklers to chase off intruders. (You can pretend they're acid sprays or something.)

Make It So

Why should barking orders at a computer be the sole province of bald-headed Brits in spandex bodysuits? The Mac OS's built-in speech recognition already gives you the ability to issue commands and trigger AppleScripts, but it doesn't necessarily have the faculties to tell Jean-Luc from the lowly Barclay. As of Mac OS 9, however, you'll be able to substitute voice authentication for hard-to-remember passwords. Rumors that a mid-2000 follow-up release will include system-level support for USB retinal scanners have yet to be confirmed.

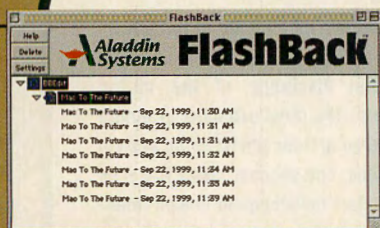
Looking Busy

Remember how the computer revolution was supposed to liberate us humans from the toil of labor, ushering in the three-hour workday and creating a slew of newfangled social problems as we struggled to fill our idle days? Ha! Well, you can still work toward this goal, just so long as you do it covertly. First, get a fast Internet connection so you can plausibly telecommute. Then set up a bunch of AppleScripts to send random time-wasting email memos back to the office. Lastly, set up Big Island's YoYo Call Tracker (\$119, <http://www.big-island.com>) to screen incoming calls and notify you via email or pager when some bigwig phones, so you can dash off a reply from your island hideaway. Now *that's* progress!



Blind Yourself with Science

6 Projects for the Armchair Mad Scientist



EARLIER FORMS OF OUR MANUSCRIPT are retained in FlashBack's ancestral memory for instant reversion.

Time Travel

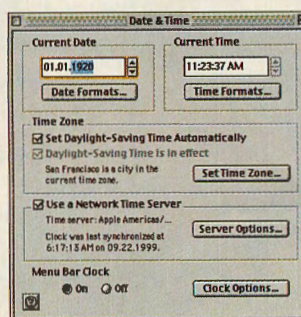
Who among us doesn't long for the power to redirect time's arrow? The Mac's Date & Time control panel gives you a certain amount of leeway to skip chronologically back and forth, though it's currently limited to dates between January 1, 1920, and December 31, 2019—too late for dinosaurs, too early for Morlocks versus Eloi. After you revert the date back to normal, altered files retain their time-warped modification dates, allowing you to fetch documents from next week or turn back the clock and submit that project two days earlier. For another take on time distortion, try Aladdin's FlashBack (\$69.95, <http://www.aladdinsys.com>); this file-archiving utility allows you to regress documents back to their earlier forms, just like in *Altered States*.

It's Artificially Alive!

Just because Victor Frankenstein slipped up on quality control is no reason for you to shy away from one of the most primal of science-fiction pursuits—the creation, rearing, and guided evolution of artificial life. You can raise virtual fish and other pets via Mindscape's line of "virtual life" creatures (<http://www.mindscapegames.com>)—its Mac species include Catz, Dogz, Oddballz, and the fish featured in Aquazone Deluxe. But why settle for PC hand-me-downs when you can start a career in honest-to-gosh genetic meddling, aided by gene-splicing scientific software from such companies as Textco (<http://www.textco.com>), BioTools (<http://www.biotoools.com>), and Biosoft (<http://www.biosoft.com>)?

Mind over Mac

For the mad scientist, voice communication is only a stepping-stone. Luckily, telepathic communion with your Mac is actually achievable for the deep-pocketed hobbyist, thanks to IBVA Technologies' Interactive Brainwave Visual Analyzer (\$1,300, <http://www.ibva.com>). This sensor headband monitors your brainwaves and displays them on your Mac's screen; with practice, you can train yourself to generate specific brainwave patterns and then match these to computer commands. A wireless option makes for mind control that would make any cyberpunk green with envy.



THAT'S AS FAR BACK AS SHE GOES— sorry, Archduke Franz Ferdinand, we did our best.

able you to perform just about any action you can imagine on a distant Mac. By sending commands across the Internet, you can move and manipulate files, launch applications, and display taunting messages on the screen of a machine halfway around the world. And you won't even have to clutch your head and sweat a lot.

Clone Yourself in Cyberspace

We can't all afford the R&D outlay to develop our own scaled-down sidekick, but through the magic of avatar technology you can project your own Mini-Me incarnation into a virtual online realm. If you're seeking a personalized proxy for your violent instincts, the Quake series and its ilk let you download new 3D models to wear into networked combat, or you can even slowly and painstakingly craft your own polygonal replica. If, on the other hand, you'd rather shake hands than break heads, check out the Sci-Fi Channel's The Palace (free, <http://www.thepalace.com>) for a graphical chat experience—you can create your own illustrated stand-in to meet and greet your chat buddies.



AN ASSORTMENT OF AVATARS cavort in the Sci-Fi Channel's The Palace chat room.

Raise the Dead

Resurrecting the dead is the ultimate taboo, even for a mad scientist. Invariably such tampering with the basic order of nature leads to zombies, flesh-eating, and vast quantities of goo. Within the well-ordered universe of your Mac, however, you can tinker with reviving dead applications in relative safety—thanks to the software equivalent of *Reanimator*, Karl Pottie's Keep It Up (\$22, on The Disc). Intended for use with mission-critical server applications, this handy utility doggedly relaunches key programs whenever they quit (unexpectedly or not), over and over again, until they're begging you to kill them...but they just can't die! Such is the dark side of science.

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BY IAN SAMMIS

& DAVID REYNOLDS

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.macaddict.com](http://www.macaddict.com)

iBorg runs rampant in the offices of MacAddict!

...and only MacAddict readers can control it!

Everyone has a dream. For some, it's graduating from second grade and going on to bovine university. For others, it's traveling through time for fun, profit, and ultimate world domination. As for us—we've always leaned toward creating a Mac-based killer robot.

Thanks to recent technical innovations from Apple, our day has finally come—with AirPort, our robot can free itself from its control tether and wander anywhere within 150 feet of its master. Thanks to BeeHive's ADB/IO (<http://www.bzzzzzz.com>—that's six z's, folks), we can control the motors that drive our robot

around. Thanks to PC Accelerator's recent description of us as its "evil, red-headed stepsister," we've even got a victim.

As we write this, our robot, which we've dubbed the iBorg, is nearing completion. We'll give you a glimpse of the iBorg's current state, as well as a step-by-step description of its creation. When finished (by the time you read this), you'll be able to go to our Web site (<http://www.macaddict.com>) and take it for a spin. If you've got droids on the brain, we've got all you need to turn your delusions of power into reality.



OUR ORIGINAL MOTORS WEREN'T UP TO pulling our cumbersome robot about, so we used much more powerful gear motors instead. We've included the D battery for scale.

THAT'S NO MOON, that's a Web cam!

WITH THESE RELATIVELY STURDY mounts, the iBorg's motors can easily pull it along.

A SMALL TWO-PORT HUB lets the iBot both move and see.

THE BRAINS OF THE BEAST—a blueberry iBook.

GRIFFIN'S IMATE lets the USB-based iBook connect to the ADB-I/O.

USING CASTORS AS REAR WHEELS allows the iBorg to corner like it's on rails.

THESE ENORMOUS WHEELS should let the iBorg maneuver well even in the somewhat hazardous conditions prevalent in the MacAddict offices.

THIS ADB-I/O links the beautiful iBook to its monstrous robotic alter-ego.

Initial Design

We originally conceived of the iBorg as an iBook with wheels—a revised version of our old MARS probe (see "Introducing the MacAddict Remote Sensor Probe," Jul/97, p54) that would use AirPort to allow Web-enabled Mac addicts to explore Imagine Media's offices. This requires a relatively large, heavy rover; the iBook alone weighs over six pounds, and the iBorg would also need to carry enough batteries to power its motors and any other devices requiring juice. Following a brief flirtation with the notion of mounting a lead-acid car battery, we reclaimed our sanity and settled on several 6-volt lantern batteries as a power supply. After some scribbling in ClarisWorks with shapes representing the iBook and the batteries, we decided to create a base for the iBorg on a 24-by-16-inch piece of plywood.

During a trip to a skateboard shop, Dave found the ultimate in iBorg wheels—a pair of off-road skateboard trucks and tires that would allow the iBorg to negotiate even relatively difficult terrain. The two-inch rubber wheels were large enough to make attaching motors relatively easy—smaller wheels would require very precise work we weren't sure we could handle.

Steering

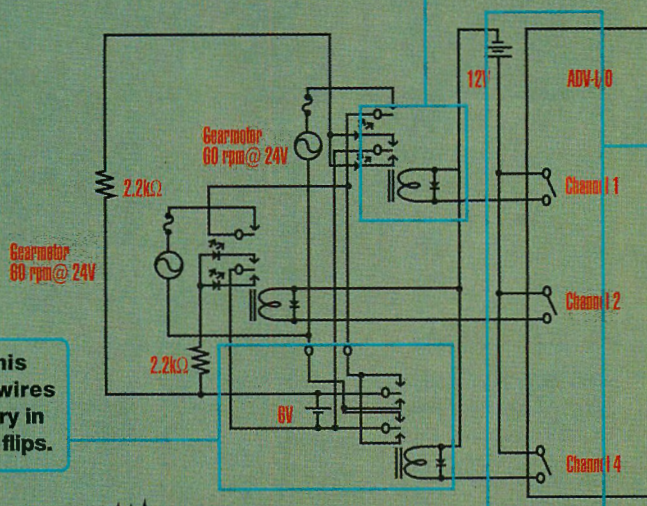
Our attention turned next to steering—what use is a killer iBorg if you can't tell it where to go? Due to the extreme limits of our mechanical skill, we decided to use differential steering instead of actually trying to turn one of the trucks. To steer a robot differentially, you need to drive each side of the robot at a different speed, causing the faster side to pull around the slower side. To turn the iBorg right, for example, you could stop (or even reverse) the motor on the right wheel. For this to work well, the machine needed to be able to pivot well around its rear wheels. We decided to use castors in the back instead of a second pair of skateboard wheels, giving the iBorg a surprisingly tight turning radius (castors are like shopping cart wheels—they can pivot to face their direction of travel). Differential steering also required that we use separate motors for the two front wheels so we could start and stop each wheel independently.

MOTOR CONTROLS—The relays turn the gear motors on or off. They also control whether the green or the red LED is lit.

ADB-I/O RELAYS—These control circuits use a relatively small current flowing through the ADB-I/O to control the much larger currents that the motors use.

THREE RELAYS, TWO FUSES, and a whole bunch of alligator clips were not harmed in the making of this robot.

MOTOR REVERSE—This frightening tangle of wires just hooks up the battery in reverse when the relay flips.



Control Circuits

At the heart of our control circuitry beats an ADB-I/O, which allows a Macintosh to control four relays (electrically triggered switches). We hoped to use two of these relays to switch our motors on and off. The iBook doesn't have an ADB port, so we used a Griffin Technology iMate (\$39, <http://www.griffintechologies.com>), a USB to ADB converter, to connect it to the ADB-I/O.

Unfortunately, our powerful gear motors drew up to 700 milliamps of current, while the small relays in the ADB-I/O couldn't handle

more than 500mA. To avoid burning out the ADB-I/O, we purchased much larger 5-amp relays, which we controlled with small currents switched by the ADB-I/O's smaller relays. Because our initial motor mounts weren't terribly solid, the motors initially tended to twist in their mounts and short out. This forced us to put fuses inline in the motor control circuits to keep the short circuits from draining our batteries.

Unless we could reverse the motors, the iBorg would be unable to get itself out of tight corners without assistance. Electric

motors run backward if you hook up a battery in reverse, so we rigged a simple circuit that would effectively hook up the battery backward when we flipped a third relay inside the ADB-I/O. This meant we couldn't run the two wheels in opposite directions, but the iBorg turned well enough with one motor stopped and the other running so that we weren't too concerned about the loss of maneuverability.

To add a final stylistic touch, we mounted red and green LEDs that would quickly let us know if the motors were on or off.

Drive Train and Disaster

Now it was time to build a drive train. Here, disaster struck. We were in a hurry, so we bought a pair of motors long before completing the chassis. Unfortunately, we dramatically underestimated the amount of force required to pull the iBorg's heavy chassis. Our original motors could only deliver a meager amount of torque (torque is the strength with which a motor turns its shaft)—they simply weren't strong enough. We could make the wheels move if we gave the motors an enormous mechanical advantage (this is how an automobile motor pulls a car—the engine spins much faster than the car's tires, thanks to the gears in the transmission), but that reduced the iBorg's speed to an excruciatingly slow crawl.

After a few failed experiments with rubber bands and gears, we gave up and tried new motors. We switched vendors from Edmund Scientific (<http://www.edmundscientific.com>) to McMaster-Carr Supply

(<http://www.mcmaster.com>), a company that caters to serious industrial concerns and hobbyists gone mad. We bought a pair of Phillips gearmotors from McMaster that could lift over 8 pounds with a 1-inch pulley. After we mounted these motors, the iBorg could easily move under its own power. The mounts turned out to be somewhat tricky—unless we were quite precise in the placement of the motors, they'd lock off-center and jam. After a few failed attempts, we built sturdy aluminum mounts, which worked well.

Software Control

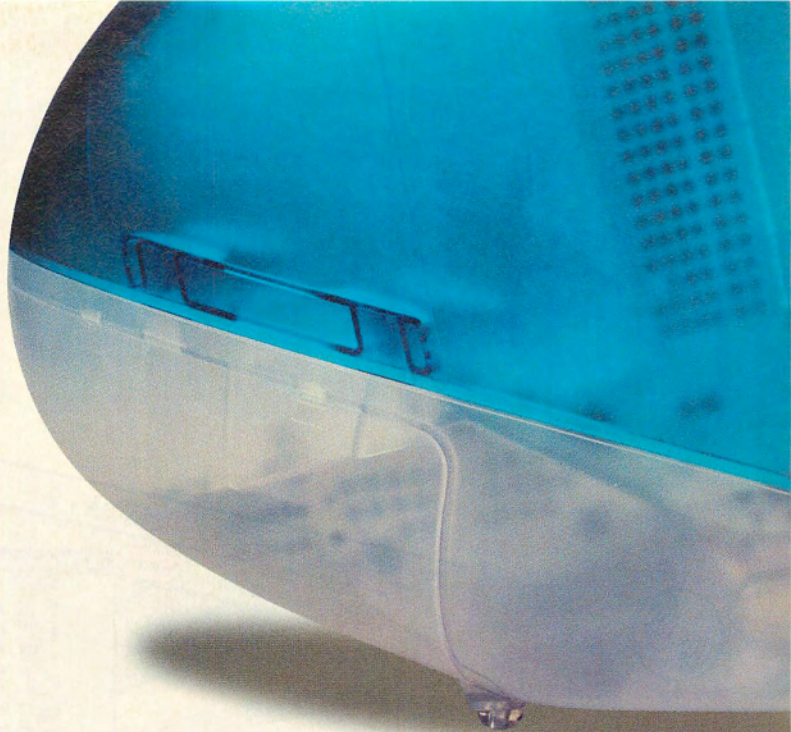
Thanks to BeeHive's excellent drivers, you can control the ADB-I/O from nearly every major application with a scripting language. For our initial tests, we connected a PowerBook G3 to the ADB-I/O and wrote a series of simple AppleScripts to control the motors. We encountered two

problems: Multiple commands sent to the ADB-I/O in tight succession didn't always work, and the ADB-I/O would switch both motors on when the attached PowerBook went into Sleep mode. Turning off sleep in Energy Saver cured the iBorg's sleepwalking problem, while putting delays between the ADB control statements made all the ADB commands work.

The Future

As soon as our AirPort card arrives from Apple, Sorenson Broadcaster and CGI scripts will allow us to control the iBorg remotely with a Web-based interface. We'll also be adding a dash of style to the iBorg—soon our creature will be more than a motorized plank with a tangle of wires. Keep an eye on our Web site for iBorg updates—especially if you work for PC Accelerator.

Like Steve Jobs, David Reynolds and Ian Sammis are now slaves to their evil robotic creation.



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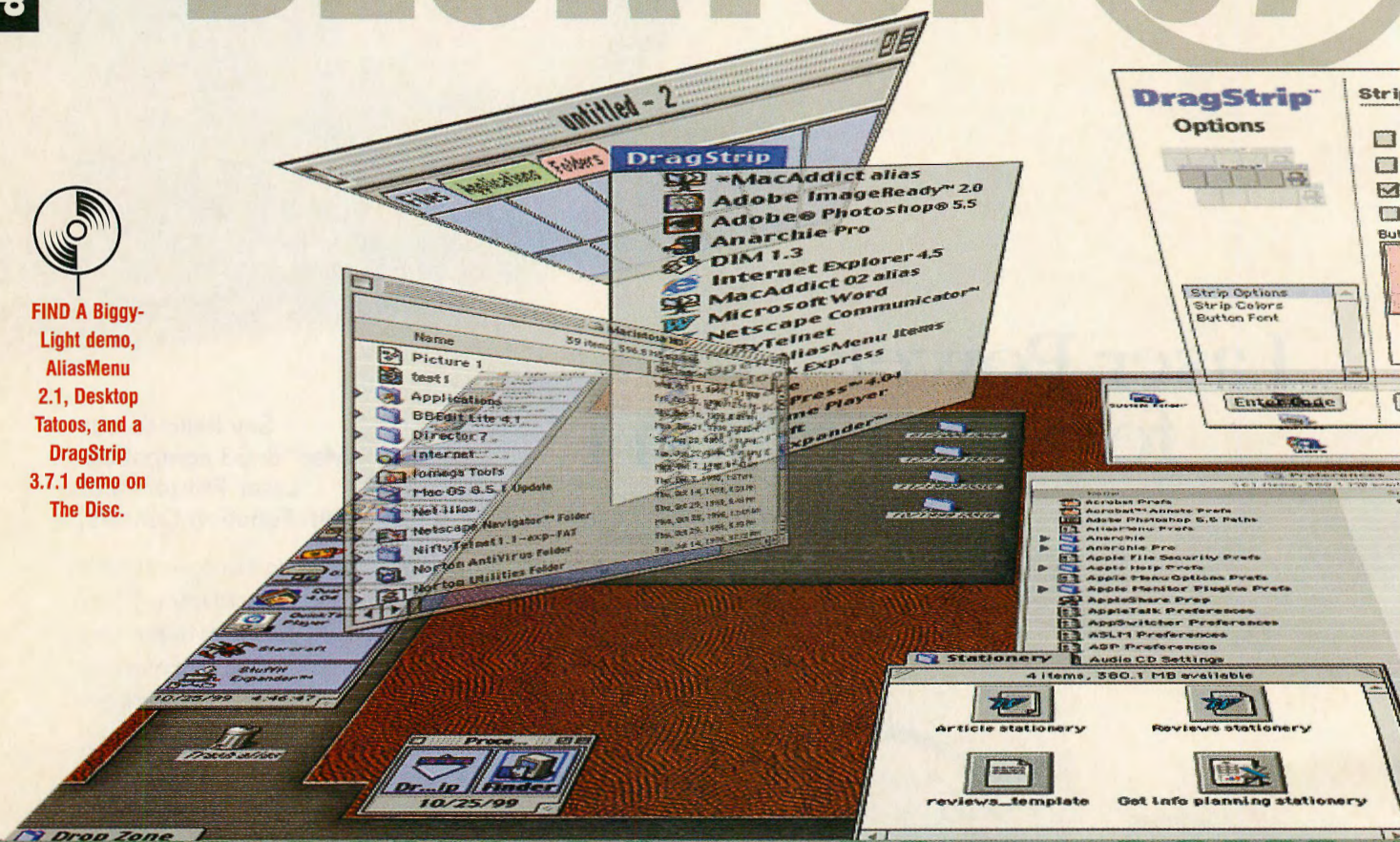
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DESKTOP of



FIND A Biggy-Light demo, AliasMenu 2.1, Desktop Tattoos, and a DragStrip 3.7.1 demo on The Disc.



Take your Mac into

Rules to Mouse By

In creating our desktop of tomorrow, we followed five basic guidelines based on the works of several user interface design experts (and we consulted the cracks in the concrete footing of San Francisco's TransAmerica pyramid just to be sure). You should be able to apply these guidelines to other parts of your Mac's interface, making it easier than ever to move around and get work done.

Remember that bigger is better—

Sometimes we make mistakes such as recommending using small icons for desktop icons. After living with them for awhile, we

came to the painful realization that bigger icons are faster and easier use. The reason is akin to why it's easier to hit a turkey than it is to hit a turtle dove when hunting—the target is bigger.

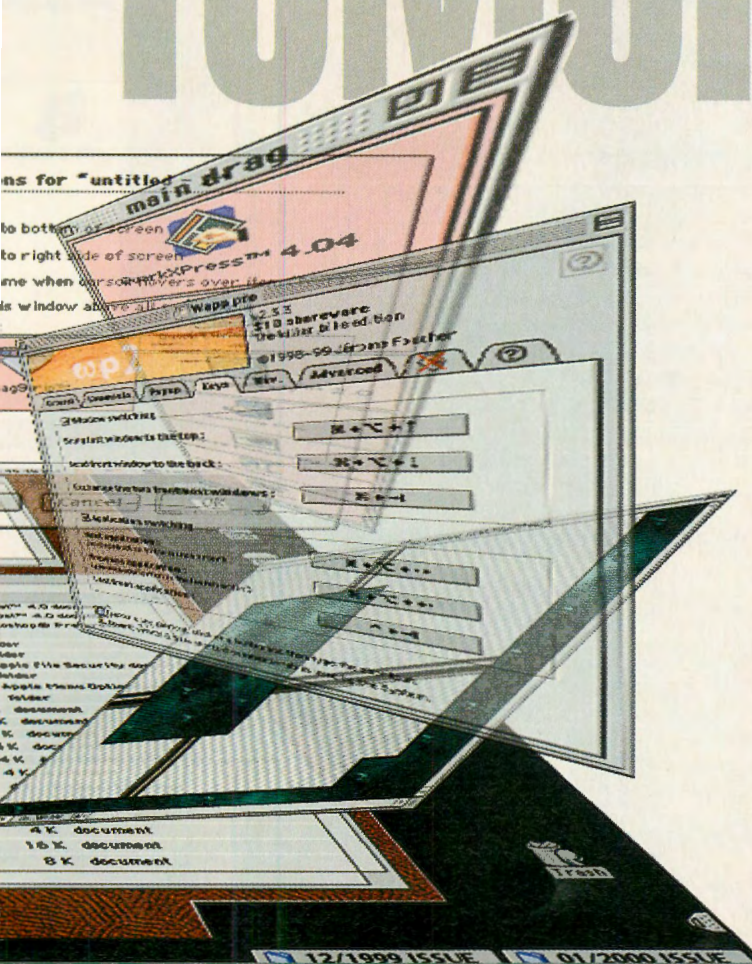
Think of your cursor as a gun and icons or menu items as targets you're shooting at. As you move your cursor across the screen, you're essentially shooting at the icons on your desktop. A large icon has more eligible surface area to click, and thus it takes less time to score a "hit." The biggest target available in the Mac OS is the Button. Sure, it looks a bit childish, but the button is the easiest icon to settle a cursor over. Also, the button only requires one click (as opposed to two) to launch the

item that it represents. Today's larger monitors make this especially important—a 32-by-32-pixel icon looks awfully small at 1280 by 1024 compared to 640 by 480 (the original resolution for which they were designed). As a crude rule of thumb in your day-to-day application use, make sure that button sizes in palettes are set to their biggest size where possible.

Keep your options open—Most Mac applications let you do one thing several different ways. This is handy for shared Macs—after all, not everyone does everything the same way. It's easy to create the same sort of flexibility in the Finder through a couple of readily available util-

TOMORROW

desktop



ometimes we think we're *such* big Mac smarties. We fling our beautiful desktop patterns about, cram tons of icons on the screen, and squeeze as many menus as we possibly can into the menu bar. Sure,

it seems like we have the most whiz-bang desktop around, but what we've really created is an unholy mess that does nothing but cause us to waste time—time spent moving the cursor in an attempt to click on that tiny application icon, time spent finding the proper folder on the desktop, time spent doing nothing but navigating the mess that our Mac has become.

That's so 1999. We're rolling up to the year 2000, man. Two-freakin'-thousand. It's the future coming up on us like a Peterbilt on an off-ramp, and we can either freeze in the headlights with our plastic-fantastic stuck-in-the-'90s desktops, or we can jump into the future with a clean, elegant, and (most importantly) stylish new user interface. Face the oncoming millennium with your head held high. And yes, we know it begins in 2001, you heathens.

So follow along! We've carefully analyzed user interface guidelines and the works of prominent human interface experts to understand what makes up a clean, easy-to-use, and efficient user interface, and we've sunk all of this knowledge into creating the Desktop of Tomorrow. And, because we're not stingy pigs (despite what you may have heard about us), we'll even share this with you. Oink.

the Future

by David Reynolds

ties. Options are always good. By creating two or three ways to achieve the same goal, you'll always have a way to get what you want done.

Use borders to your advantage—

One easy way to speed up selection of icons is to put them next to a natural border, such as the edge of your desktop. This edge acts as a natural stop, keeping your cursor arrow from overshooting its target and saving seconds each time you try to select an icon. With your often-used icons lined up against the side of the screen, you can slam over at high speed, assured that you won't overshoot your intended target by more than a few pixels.

To use this to your advantage, line up icons or floating toolbars with the edges of your screen. If you have multiple monitors, align your icons with edges that the cursor doesn't pass through from one monitor to the next. Otherwise, you won't gain the benefits of the stopper.

Stay consistent—

A shining example of interface consistency, Mac applications look and feel much alike, making it easy to apply what you've learned while using one application towards using a new application. In fact, Apple is so committed to this uniform look that the company has authored books on how to make applications conform to its human interface

guidelines. Consistency makes the Finder friendlier by keeping icons arranged in the same manner (routinely using list views and icon views, and making sure that your organization schemes jibe well). Sure, sameness is boring, but that's precisely the point.

Open your eyes—

By and large, we use our vision to get things done. We click, drag, and drop by watching the arrow and icons on the desktop, so it helps to make sure that those things really catch your eye. By choosing low-contrast desktop patterns and pictures with an organizational pattern, it's easier to find what you need at a glance.

**Handy Window**

Menu—With the handy shareware widget Wapp (a menu that shows all open windows), you can get a handle on your windows.



AliasMenu—With AliasMenu, you can add menus containing aliases to items you frequently use. Here, we have one for control panels, one that mimics the contents of the DragStrip window, and one with aliases to frequently accessed folders.



Aliases—Sometimes you'll need aliases to commonly used apps, files, and folders. Find an easily accessible spot on the desktop for these.



DragStrip—Include aliases to frequently used applications in a DragStrip window that's anchored to the left side of the screen. It's aligned so that the screen's edge will stop the cursor conveniently over a button.

**Functional Desktop**

Pattern—Desktop pictures can be both functional and elegant. In this case, the desktop pattern has a natural resting place for drive icons and other icons.

**Trash Alias**

By including an alias to the Trash on the left side of the screen, travel time to trash a file is cut in half.




Pop-up Windows—By including a pop-up window with frequently accessed items, you can keep them at your cursor-tip without having them in the way. This pop-up window's contents are the same as those in the DragStrip.





Process Menu—Whether it's the Finder's floating process window, or DragStrip's, having a window listing which applications are open provides another place to drag and drop items and shows you where your Mac's resources are tied up at a glance.





Buttons—Keep icons in pop-up windows arranged as big one-click buttons. You won't roll past them, and they take only a single click to launch.


 **Appropriate Icon View**—When there are just a few items in a window (five or less), then view the contents as icons. The human brain has a hard time recognizing more than five or six items at a glance.


 **Status Clock**—By setting the clock to display seconds (allowing the colons to flash with each passing second), it's obvious whether or not the system is locked up.

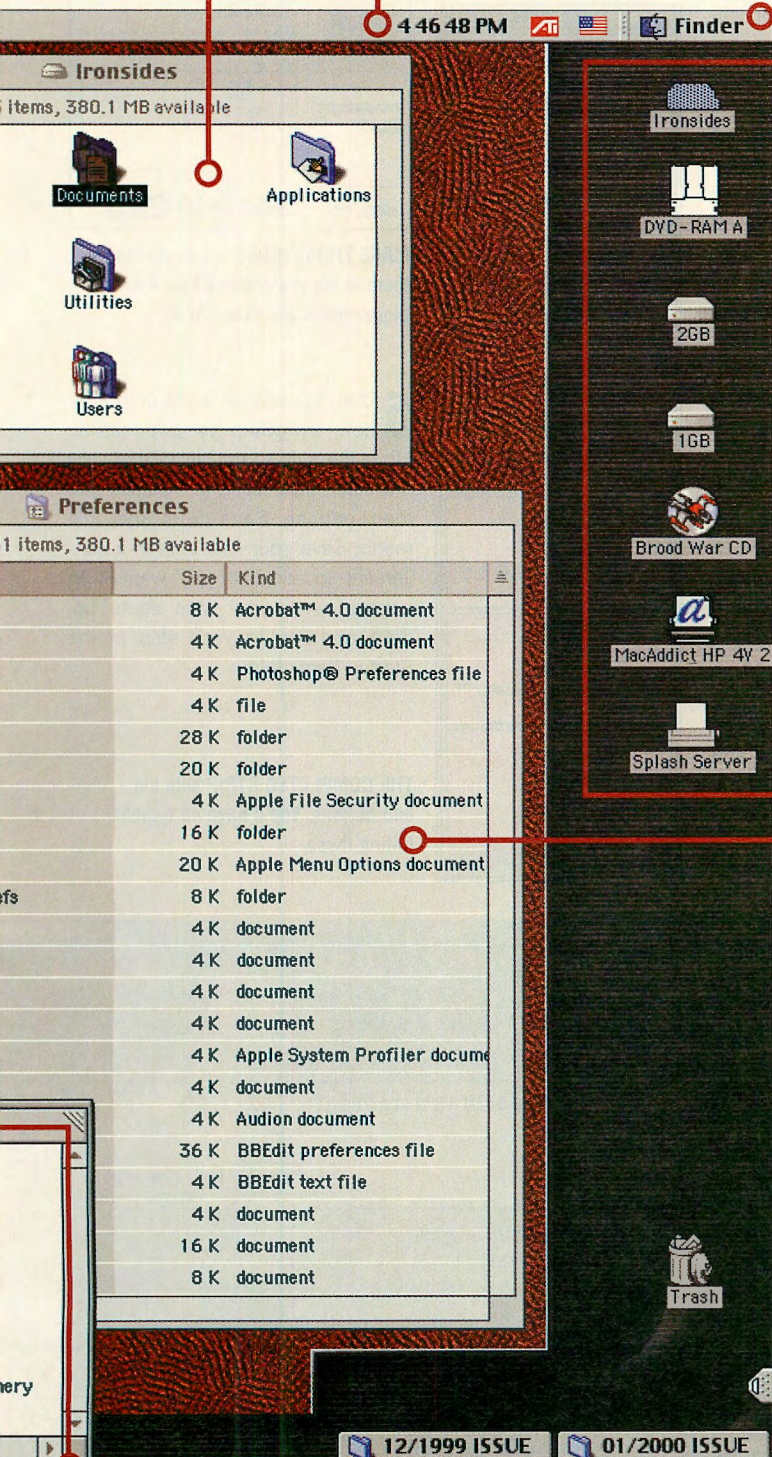
 **The name's the thing**—if you have the real estate in your menu bar, view the Application menu with the full name of the current application. This will reduce time figuring out what app is up front.

 **Arranging Volumes**—The Finder takes care of arranging hard drives along this side of the desktop—how nice!

 **Appropriate List View**—When there are lots of items in a Finder window, it's time to view the contents as a list. That makes locating files much easier than viewing by icons.

 **Relocated Control Strip**—Although the Control Strip is an easy-access item, it often gets in the way. By holding down the Option key, you can drag the Control Strip tab to any location on the right or left side of the screen. We find that the lower right side, a bit off the corner, is a great place for it.

 **Pop-up Window Shape**—Match the width and height of pop-up windows. You'll minimize mousing time to any given point in the window from where you click to pop it up.



Desktop of Tomorrow

DragStrip \$20, Aladdin Systems 831-761-6200, <http://www.aladdinsys.com>

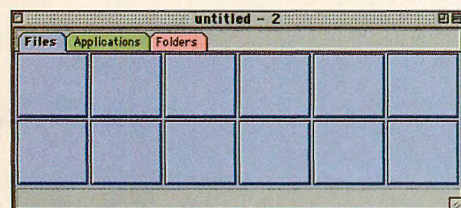
DragStrip started out as shareware, where Aladdin saw its potential and decided to give it a new life as a commercial utility. At its heart, DragStrip lets you create customizable *docks* for applications, files, URLs, and folders—in other words, pretty much anything that can live as an icon on the desktop. DragStrip is customizable, letting you tweak everything from the size and orientation of the strip to its colors. Here's how to set up DragStrip

for maximum efficiency—we'll assume that you've downloaded and installed DragStrip already.

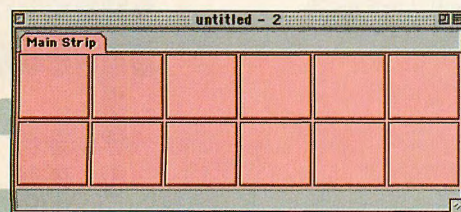
1 From the File menu, select New Large Icon With Name. You'll get a window with a 6 by 2 grid of icon wells and three tabs.

2 Select Remove Current Page twice from the Options menu, leaving a single pink tabbed page. Select Rename Page from the Options menu and give it a more personal name.

3 Select Rotate Strip from the Options menu, and then select Hide Page Tabs from the Status/Title Bar submenu under Options. Select Draw Horizontally from the same submenu.

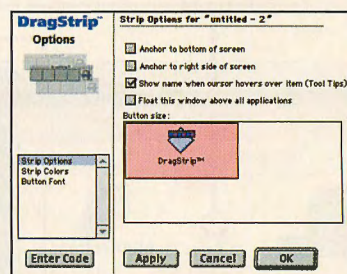
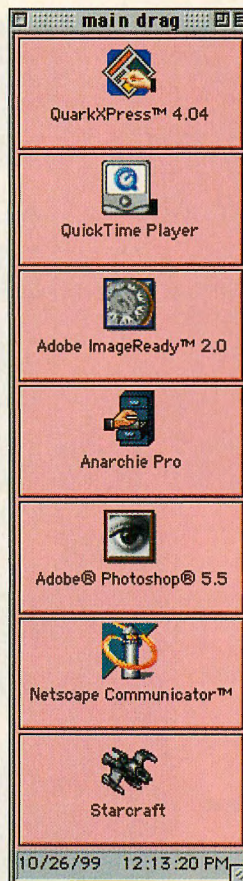


A BRAND NEW DragStrip ready to be molded to your liking.



TIDYING UP IS EASY once we get rid of all of those extraneous pages.

4 Using the corner drag box, resize the strip until just a single column of icons shows. Select Untitled Options from the Options menu, and in the dialog box that appears, resize the icon until the entire application name appears and the button is suitably big. Click OK.



MAKE THOSE ICONS big by resizing them in the preferences box. After all, bigger icons are easier to hit.

5 Drag application icons onto your new DragStrip to populate it. Move the strip to the left side of your monitor—against the edge—and then choose Save from the File menu. Save your new strip in a convenient location. If you want it to appear when your Mac starts up, drop an alias to your strip in the StartUp Items folder.

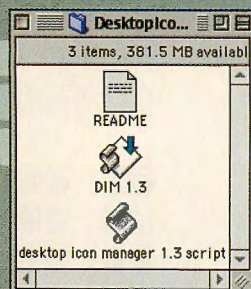
THE COMPLETED STRIP with big, bad buttons. You'll have *no* trouble hitting these.

Desktop Icon Manager 1.3 Free, G.J. Parker <http://www.cwws.net/~parker9/script.html>

Getting all of those icons neatly arranged on your desktop may seem like a great idea—and it is—but the first time you use an application that switches your monitor resolution (such as a game), you'll find that your carefully constructed icon scheme is scattered to the four winds. We have the solution.

While there are several utilities that will remember your icon placement and put things back where they belong, we have one particular favorite: Desktop Icon Manager. This simple AppleScript application looks at where applications are placed on the desktop and puts things back after a resolution switch. Desktop Icon Manager keeps an icon placement database, and can even restore icon positions at a different resolution from the one at which they are stored. Here's how to set up Desktop Icon Manager.

1 Double-click the DIM 1.3 icon. The AppleScript will launch.



DESKTOP ICON MANAGER includes the raw AppleScript used to create it, in case you've got a hankerin' to alter the script.

2 Click Create to make an icon position database. This lets Desktop Icon Manager create a database that you can use to rearrange icons gone wrong.

Create icon position database?

Cancel Create

THE DATABASE HOLDS information about all things iconnic.

3 When the program asks you if you want Desktop Icon Manager to notify you when it wants to reset icons, select Prompt in the next dialog box. If that sort of thing irritates you, just click Automatic. That's it. Your desktop state is saved.

Prompt or Automatically restore icon positions on run?

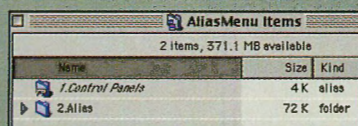
Cancel Automatic Prompt

YOU'LL PROBABLY WANT to know when Desktop Icon Manager wants to reset things, and you get the choice here.

AliasMenu 2.1

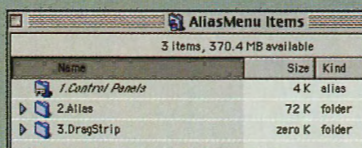
\$10, Benoit Widemann
<http://www.integra.fr/bw/aliasmenu-us.html>

One of the best ways to get at something is to put it in a menu. Taken to an extreme, this can get pretty annoying as the menu bar fills with clutter, but with a little restraint, you'll find that menus are tremendously useful. One great way to pull this off is to use the utility AliasMenu. To install, drop the AliasMenu Control Panel on your closed System Folder, and your Mac will do the rest. Just restart, and you'll be on your way. Once you have AliasMenu installed, you'll need to configure it for your own use. Here's how to create an AliasMenu that matches the contents of your DragStrip.



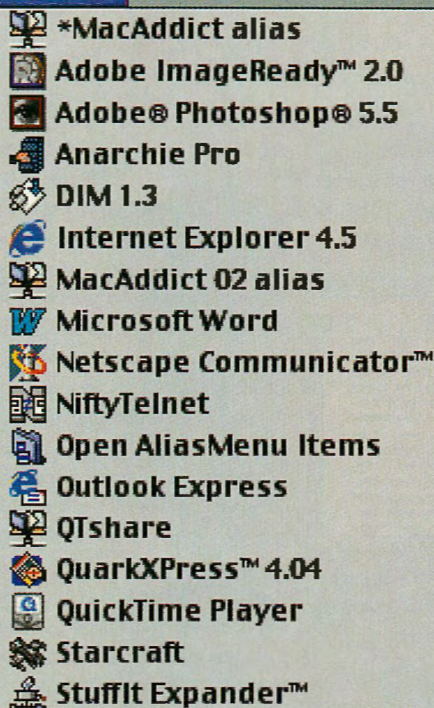
ADDING A MENU is as easy as adding a folder in this window.

2 Create a folder called 3.DragStrip. A menu item called Drag-Strip will appear in the menu.



WE'VE PUT OUR MENU item up there—now we need to populate it.

DragStrip



AND THERE IT IS—another place to access frequently used items.

3 Drop aliases to every item in your custom DragStrip into this new 3.DragStrip folder. Now, you'll have access to those items either via the DragStrip window or the DragStrip menu.

Desktop Tattoos

Free, Digital Manipulation
<http://www.digitalmanipulation.com>

The problem with desktop pictures is that, most often, they're eye candy at best and distractions at worst. (Some of the ones that ship with later versions of the Mac OS are truly dreadful.) A bad desktop picture—typically one with lots of contrast, bright colors, or lots of elements—can obscure icons, making it difficult to find them on the screen.

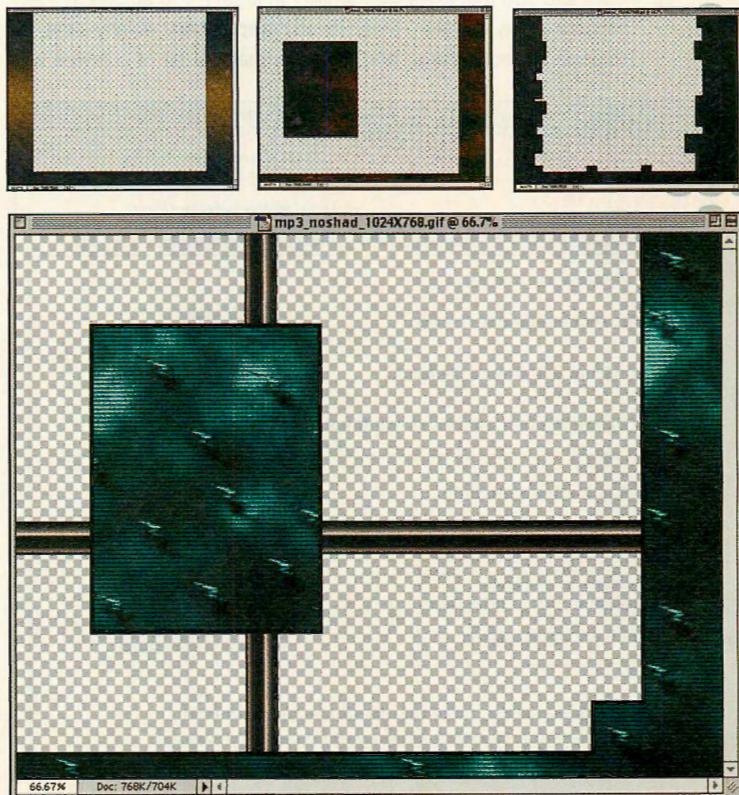
Fortunately, a few graphic artists have foreseen that desktop pictures can be used for good as well as gratuitous 3D renderings of fantastic objects. One especially nifty set was created by Marcus Conge of Digital Manipulation. These pictures are GIF files with transparencies, which let your desktop pattern show through the desktop picture in strategic places while providing a natural organization outline right there on your screen. Brilliant!

Here's how to use Desktop Tattoos (several of which are on The Disc):

1 Mount one of the disc images containing Desktop Tattoos by double-clicking the self-mounting image.

2 Open the Appearance folder in the System Folder, and drop the Desktop Tattoos that you want to use in the Desktop Pictures folder. Close the Appearance window and the System Folder window.

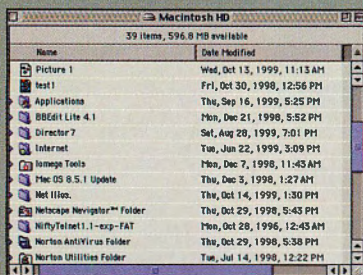
3 Open the Appearance Control Panel, select the monitor on the left side of the window and click the Place Picture button. In the dialog box that pops up, you should see the Desktop Tattoos. Select one you want to use, click the Open button, and then click the Set Desktop button. There you are—and it didn't even hurt.



THE WONDERFULLY CLEVER Desktop Tattoos desktop pictures provide lots of options for organizing your desktop. Just be sure to choose a desktop pattern that's not too garish for the background (the checkered area in these images).

Smart Scroll 3.5 \$12, Marc Moini <http://www.marcmoini.com>

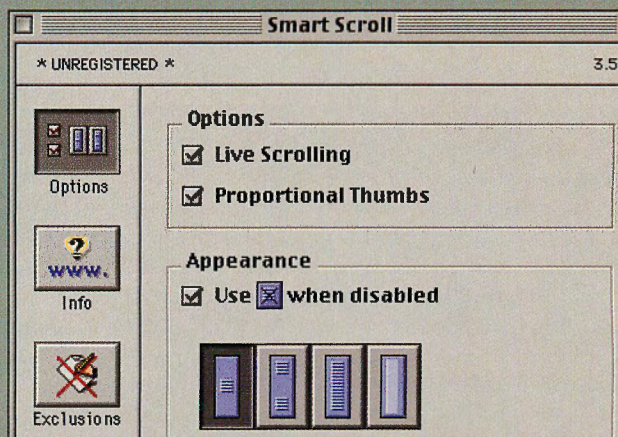
Sometimes, an enterprising developer will take a good idea and do it very well—sometimes even better than the heavy hitters over at Apple. That's the case with Smart Scroll 3.5, a utility that we've been following for a few years. Smart Scroll adds enhancements to the common



SMART SCROLL PUTS scroll arrows all over your Finder windows, making it easy to find a scroll arrow when you need one.

scroll bar as Apple should have done instead of implementing their so-called "smart scrolling." Marc Moini's Smart Scroll puts up and down scroll arrows at each end of the scroll bar, so you can scroll up or down no matter which end of the scroll bar your cursor is closest to. Smart Scroll also uses proportional scrolling thumbs—the box between scroll arrows—to show you how much of the document is hidden. The smaller the scroll thumb, the more of the document that's hidden.

Currently, newer versions of the Mac OS implement what Apple calls "smart scrolling," which gives you the proportional scroll thumb



WITH JUST A FEW options, you'll have your scroll bars customized in no time.

(good) and puts the two scroll arrows together at the bottom of the scroll bar (bad—very bad). The idea is to keep from having to travel all around to scroll, and Smart Scroll does a great job of this.

Installation is easy—drop the Smart Scroll Control Panel onto the closed System Folder and the Finder will put it where it belongs. Simply restart to have the scroll bar of your dreams—and one that's guaranteed to make your scrolling more efficient.

Wapp Pro 2.3.3 \$10, Jérôme Foucher <http://come.to/beastieit/>

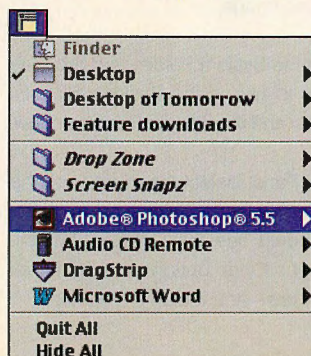
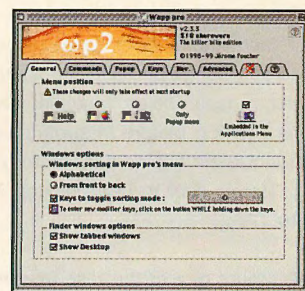
Gather 'round, folks, we're going to let you in on a little secret. What if we told you that there was a utility that gave you access to every window open on your Mac, in any application, at any time, all through a single menu, and, that this magical bit of software was

only \$10? *Right*, you might say. It's true, and it's called Wapp Pro. This marvelous feature-packed control panel creates a single menu that shows every open window in a single menu, which means that any open document is just a click and a drag away. But Wapp Pro is much more than that.

Wapp Pro also works like a hopped-up Application Switcher (which lets you Command-Tab between applications in Mac OS 8.5 and later) by attaching key combinations to toggle between open windows and even apps. With Wapp Pro, you can hide or show certain apps from just about any application, and you can even invoke Wapp Pro with a special key combo when clicking on a window's title bar. If you work with a lot of open windows, you'll quickly become attached to Wapp Pro, and it will make your Mac work just that much more efficiently.

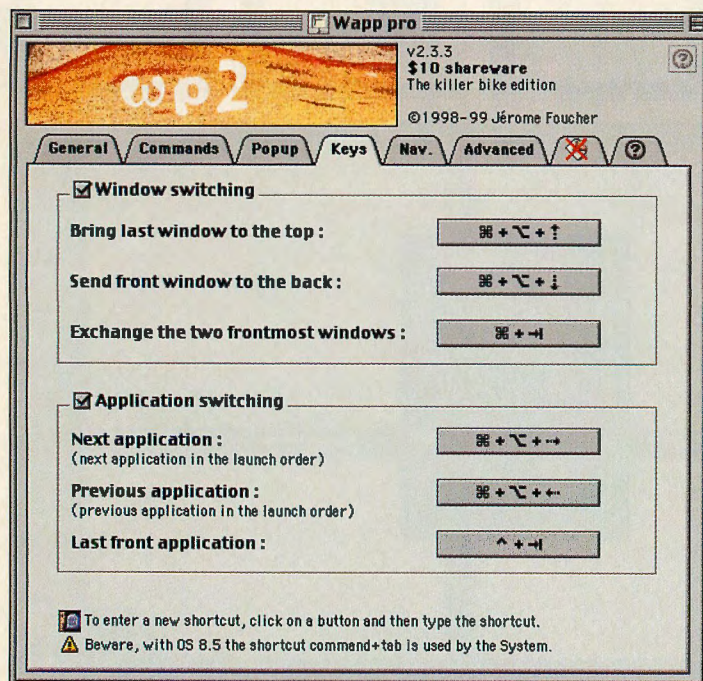
David Reynolds has given up on *Whip Inflation Now* activism and joined the '90s just in time.

WAPP PRO IS FULL of features—packed fuller than a Snickers bar, in fact. You'll probably want to leave the General settings alone, but you should choose to show tabbed windows and the Desktop in the menu.



ACCESS TO ANY window, any time through a single menu. Now that's power!

wapppro1.tif @ 100% (RGB)
wapppro2.tif @ 100% (RGB)
Quit
Hide



ONE THING THAT YOU'LL probably want to alter with Wapp Pro is key combinations—especially if you use Command and Option keys in combination with the arrow keys to move around text documents. Otherwise, you'll be surprised by a sudden application switch when you least expect it.



Windows® Compatible



Without a doubt, Macs are the best personal computers on the market today. And now, with the G4s, the Macs are also the best personal supercomputers. What's the one thing these supercomputers still need? Compatibility and interoperability with the Windows world! Connectix Virtual PC is a software solution that brings Windows capabilities right to your Mac -- run Windows programs, access PC networks, share files between your Mac and PC desktops and more. All on one computer, your Mac!

Virtual PC 3.0 is OS9 compatible and is available in three versions. You can buy Virtual PC with PC-DOS, Windows 95 or 98 pre-installed. You can also run Windows NT or Linux. Have it all on one computer and have it today! To buy or for more information, go to www.connectix.com, or call 1.800.395.1824.

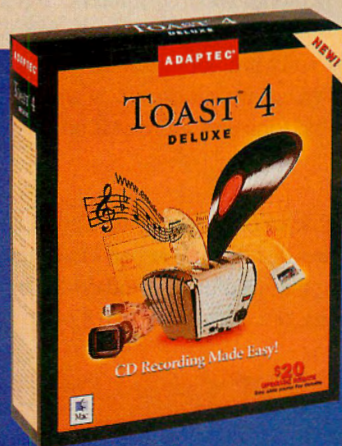


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iBook fashion



Portable, colorful, educational—Apple's iBook is more than an accessory—it's a computer, too.

iFashion



Stylish Sensibility

The life of the party knows his women, his martini, and his laptop.

Photography by Aaron Lauer

Concept by Robert Capps

Photo taken at Bruno's, 2389 Mission St., S.F.

A Purse with a PowerPC

Ready-to-go portability makes impressing your friends easy anywhere, anytime—at work, at the tractor-pull, or even just sitting around guzzling beer.

iFashion





You Know, for Kids

iDeal for education, the iBook will put a glimmer in any tyke's eye.



reviews

Feast on these Mac munchies!

iBook

HARDWARE

COMPANY: Apple Computer

CONTACT: 408-974-1010, <http://www.apple.com>

PRICE: \$1,599 (SRP)

SPECIFICATIONS: 300MHz G3, 32MB of RAM, 3GB

Hard Drive, 800x600 active-matrix display,

10/100base-T Ethernet, 56-kbps

modem, USB, sound out.



Photography by Aaron Lauer

APPLE'S IBOOK

WAS DESIGNED to drop into a backpack and go, and it can. The case design is rugged, and the battery life makes it usable almost all day long.

The iBook, Apple's long-awaited consumer portable, is here, and it was worth the wait—for some of us.

Although the iBook is a great machine, it has its limitations. It's definitely the machine for you if what you need is a Mac that's portable, durable, and can travel. However, if you're looking for an ultra-lightweight Mac with a lot of power, expandability, and hard drive space, then you should probably look elsewhere.

The iBook packs a moderate amount of power under an impressively designed hood. At its heart, the iBook is powered by a 300MHz G3, which, although it doesn't compare with the G4 in desktop Macs, is near the very top of the heap in terms of laptops. Although the performance is solid, it's not overwhelming; every other Mac on the market can beat it. Still, it has plenty of power for most things you'd want to do with a consumer-range portable, and it holds up well next to other comparable Macs. To see just how the iBook stacks up, take a look at the benchmarks sidebar.

The iBook looks and feels just like a Mac (duh), and we had no problems installing and running all kinds of software on it. Battery life measures up to Apple's claims (you'll get several hours out of a single charge) due to outstanding power management combined with intuitive sleeping and waking up. Close the lid, and the iBook sleeps. Open it, and the iBook wakes up. It's as simple as that.

The iBook's striking look—somewhere between toilet seat and purse—may be a bit disturbing for the testosterone-challenged, but it's meant to be both stylish and protective. After all, the mantra for the iBook's design is that it's a computer meant to be in a backpack. That means the design must be rugged—and it is. There's a border around the outside of the display and

keyboard that stretches as far as two inches from the edges of the display at points—this adds structural support to the display. It makes the iBook bigger than the PowerBook (the iBook measures 13.5 by 11.6 by 2.06 inches while the PowerBook measures 10.4 by 12.7 by 1.7 inches). It also adds to the unit's weight, which is more than the PowerBook (the iBook weighs in at 6.6 pounds; the PowerBook at 5.9 pounds).

The display is housed in thick polycarbonate that's immune to warping unlike the new, thinner PowerBooks. The LCD itself is limited to a resolution of 800 by 600, which we found to be surprisingly tolerable, and the quality of the display is good, too. It isn't quite as crisp as the PowerBook's display, but it's a whole lot better than the much cheaper passive-matrix displays found on previous Apple portables, and it stacks up well to some desktop monitors. The latchless spring-loaded display, while spiffy, has a tendency to slowly fall backward if it's tilted too far back (beyond about 100 degrees).

The iBook's keyboard is also quite nice. While keyboard preferences are a personal matter (We like ours with some resistance and a definite click), the iBook's keyboard is

NORTON UTILITIES SYSTEM INFO OVERALL SYSTEM RATING

The higher the number, the better the performance.

iMac/333MHz	808
iBook/300 MHz	744
PowerBook G3/287 MHz	728
PowerBook G3/300 MHz	711

(continued on p52)



FREAKIN' AWESOME

The most valuable products, the coolest gizmos.



SPIFFY

A solid offering. Overall a good investment.



YEAH, WHATEVER

A few good features, but generally a waste of time and money.



BLEH!

We hate to even blotch our pages with the thing.

Up Close And Personal

Ports of call—The iBook's I/O ports don't have doors to protect them, but in our experience, this wasn't a problem.

reviews

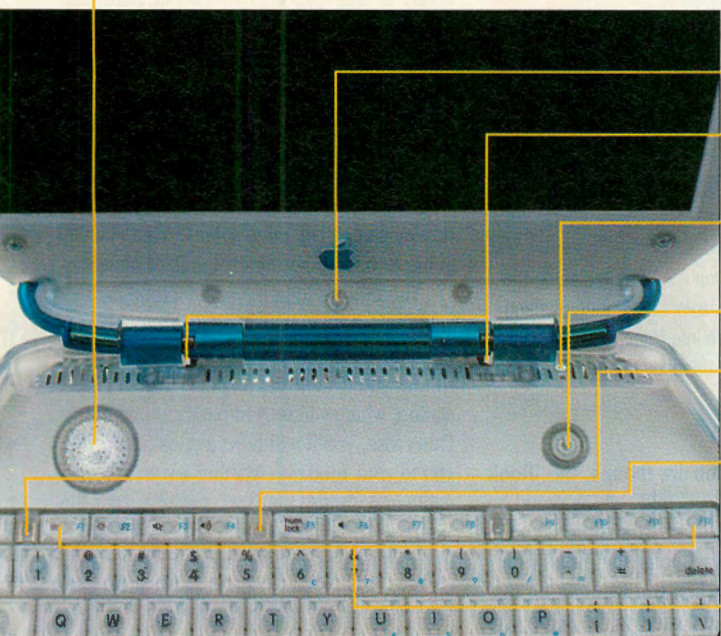


Modem—Every iBook ships with a 56-kbps internal modem. Pretty standard stuff.

Ethernet—One way around the floppy is through the 10/100base-T Ethernet port built into the side of the iBook.

USB—The only way you'll get audio into your iBook is through the single USB port. You should get a hub if you plan on using many peripherals with your iBook.

Sound Out—Getting sound out, on the other hand, is as easy as plugging in a set of headphones or multimedia speakers.



Speaker—A single speaker provides adequate sound, but for anything special, you'll want to plug in a pair of speakers.

Sleep light—This light pulses green when the iBook is sleeping. Shh.

Clutched hinges—These hinges keep the iBook closed (and open) without a latch.

Reset switch—We haven't used it yet, but if your iBook crashes, this is where you'll apply the paper clip technology.

Power button—Push, and the iBook starts up.

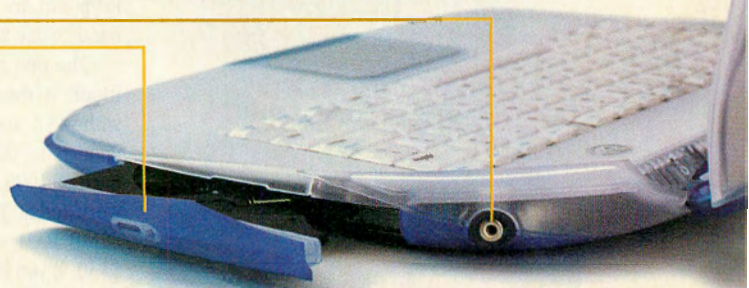
Keyboard latches—Pull back on these two latches and the keyboard will come right off, revealing the AirPort card slot and the RAM.

Keyboard lock—Don't want your keyboard popping open? Just twist the screw embedded here and the keyboard will be locked in place.

Programmable function keys—By using the Keyboard control panel included with the iBook, you can program your function keys to launch applications (including AppleScripts).

Power port—The iBook's power port has one innovative feature: a light ring around the port glows amber if the battery isn't charged, or green if it is.

2-CD-ROM tray—The non-swappable 24X CD-ROM is good enough for most uses, if not spectacular.



in review

UTILITIES

ACTION MENUS p. 59
FIREWIRE 2 GO p. 60
NORTON UTILITIES 5.0 p. 66
NORTON ANTI-VIRUS 6.0 p. 67
TOAST 4 DELUXE p. 70
FILEMAKER 5.0 p. 71

HARDWARE

IBOOK p. 50
POCKET READER p. 56
MICROSOFT INTELLIMOUSE
EXPLORER p. 61
AGFA SNAPSCAN
TOUCH SCANNER p. 72
MACDRIVE p. 73

DESIGN & GRAPHICS

TYPESTYLER 3.46.3 p. 68

PRODUCTIVITY

NOESYS 2.0 p. 57
VIRTUAL PC 3.0 p. 64

AUDIO

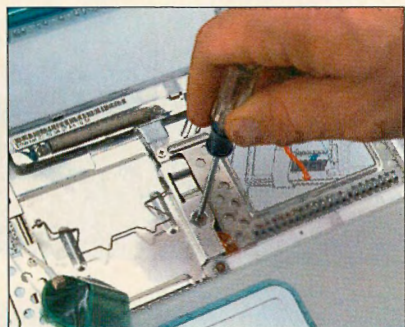
SMARTSCORE 1.2 p. 62

FUN & GAMES

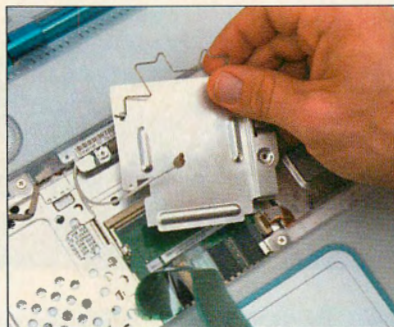
FLY! p. 54
SIMCITY 3000 p. 58
STARRY NIGHT p. 63
CARMEN SANDIEGO'S
THINKQUICK CHALLENGE p. 65

Install RAM in an iBook

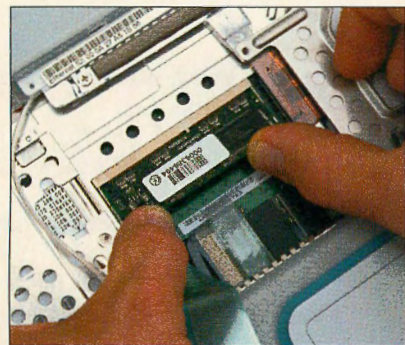
Installing RAM in an iBook is pretty easy—for a portable. (Of course, installing RAM in the new G3/G4 chassis is cake itself.) Here's how to do it.



1 Open the keyboard by pulling back the two latches between the Escape and F1 keys, and the F8 and F9 keys.



2 If you have an AirPort card installed, remove it. (If not, don't worry about it.) Remove the two screws holding the shielding in place, and then remove the shielding.



3 Slide the DIMM in at an angle as shown on the conveniently supplied CD-ROM case under the keyboard. Push it in until it's seated and the notches are aligned with the bracket. Press the DIMM down into place.



4 Close up your iBook by replacing the shield and AirPort card, then pushing the keyboard into place. Start up your Mac, and you should be ready to go!



PURSE OR TOILET SEAT? You decide.

The Best iBook

Here's the drool list that you'll need to outfit your iBook to the nines.

- iBook (\$1,599)
- AirPort card (\$99)
- AirPort Base Station (\$299)
- 64MB RAM upgrade (\$257.95)

Bottom line: \$2,254.95

Okay, that's a bit more expensive than the original iBook, but you'll be set for a while with this bit of gear.

RAM aside, we still had a few minor problems with the iBook. First, it ships without a sound input port—a real problem for those who want to do any audio work. Although this isn't a deal killer, it does prevent folks from recording their own system beeps, using Voice Verification with Mac OS 9, using speech recognition, or doing video conferencing with the iBook. Second, the iBook doesn't have a beefy enough graphics system (or enough RAM) to play Quake 3 Arena—a game that just screams to be played on a wireless network. Still, though, the iBook does have enough graphic horsepower to play most games such as Bugdom and Starcraft quite nicely—and it's a good thing, because the people who buy iBooks are probably going to want to play games on them. Those who want to play games (or do graphics) are definitely going to want to spring for the RAM upgrade.

The iBook's long battery life, though, presents another problem—one best solved with a credit card. To get the most out of your iBook, you'll want the AirPort card and base station, which will set you back another \$400. Otherwise, you'll still have a wire connecting you to your modem (whether it's an Ethernet cable or a phone cable) whenever you use the Internet, and that defeats the point of not having to plug in to a power adapter all day. After all, a six-hour battery life doesn't mean much if you're still tethered to a wall outlet.

If you're looking for a low-cost portable Mac, look no further than the iBook. Unlike the G3 PowerBook, it was never meant to be a replacement for a desktop Mac doing professional work—and that's okay because it's fast enough, it's cheap enough, and doggone it, people like it. The iBook is indeed on par with the iMac; it's just in a much smaller case and available at a reasonable price.—David Reynolds

[continued from p50]

responsive. Occasionally, though, the iBook seems to ignore a keystroke, which could be a result of the stiff keyboard action. Like the current line of PowerBooks, the iBook's keyboard flexes a bit when you type—a bit disturbing until you get used to it. Below the keyboard are two broad places to rest your hands while typing.

The one major quibble we had with the iBook is the amount of RAM that it ships with—32 megabytes. Although this was enough to do almost anything you wanted back in 1998, it's barely enough to do useful work today. The first thing you'll want is a 32MB RAM upgrade, which will run about \$130. If you buy nothing else for your iBook, you should buy a RAM upgrade. Also on the skimpy side is the hard drive—it's only 3GB. Sure, that sounds big, but it goes awfully fast. We understand that Apple has to keep component costs low to keep the iBook affordable, but a few more gigabytes on the hard drive would have been great.

GOOD NEWS: Good value for the price. Long battery life. Clear display. Rugged case design. Comfortable keyboard. **BAD NEWS:** Not enough RAM. No sound input. Can't play Quake 3 Arena. A bit heavy. Hard drive is a bit small.





One click puts your business on the Web!

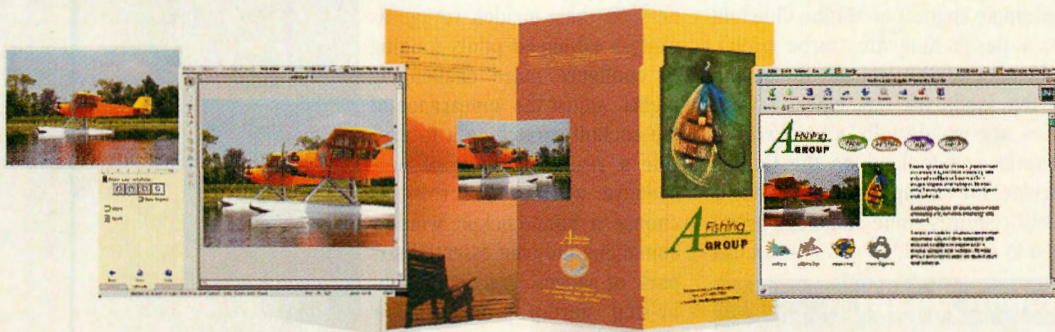
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or <http://www.iflytri.com>**PRICE:** \$49.95 (SRP)**REQUIREMENTS:** PowerPC 200MHz or faster, Mac OS 8 or later, 32MB of RAM, 70MB of virtual or physical memory, 460MB of free hard disk space, 4X CD-ROM (24X or faster if loading scenery from the CD)**HIGHLY RECOMMENDED:** G3, 1.8GB of hard disk space for full installation, 64MB or more of RAM, video card capable of 800 by 600 16-bit resolution, hardware accelerator

The disappointment flight sim enthusiasts and Macintosh gamers may have felt at Terminal Reality's delay in shipping the Mac version of Fly is liable to melt away completely after they climb into the cockpit of this ultrarealistic general aviation flight simulator and go for a spin.

Impatient types (we mention this first for a reason) who want immediate takeoff need only choose their graphics, sound, and control hardware settings, then select from a list of Fly Now scenarios. Choose from five aircraft: a Cessna 172R Skyhawk (single-engine piston, a common training plane), a Piper Malibu Mirage (supercharged single engine) or Malibu Chieftain (twin), a Beech King Air (turbo prop), and a Hawker 800XP jet, and fly around one of five landmark U.S. cities. Several scenarios are wonderfully *unrealistic*—one permits you to land on the Golden Gate Bridge, for example—but avoiding a crash still requires some skill. You aren't required to land at all, however—you can

climb and descend at will and and take a scenic tour around, say, the Bay Area.

Fly's true beauty and sophistication lie chiefly in the way it allows the user to control so many details. One great feature—especially important for people truly interested in honing their flying skills—is Fly's interactive cockpit interiors, complete with functional avionics panels that let you flip switches and monitor gauges using a realistic checklist (the manual provides brief practice lists).

Fly has something for just about everyone. Tons of aircraft control options will satisfy beginners on their maiden voyage as well as advanced pilots looking to configure more challenging flights. Adjust the appearance of the cockpit, stretching it to provide a realistic change of perspective when you scroll, or choose a mini cockpit window containing only the essential six-pack of gauges. Practice a step-by-step startup procedure, or simply click "E" to start the plane automatically. Radios complicate flight, but eventually serve as a pilot's life-line. You have the option to use VOR and NDB (common navigational facilities) and create way-points that enable the GPS (Global Positioning System) to determine your position anywhere in the world.

Fly's Air Traffic Control functions for communicating with controlled airports are fairly simplistic. Pilots cannot request touch-and-gos (repeat landings), exercise detailed instrument approaches, or use

Flight Service Stations to their full potential. But it's nice to have a built-in system, and the real sectional charts, though a little difficult to read onscreen, can determine communication frequencies in addition to offering other important information. Though add-ons like Squawkbox provide more extensive ATC capabilities than other simulators, participating controllers and pilots often take away from the realism of the sim by abusing regulations and just



HAWKER CLEARED runway two-seven left, number two. we have Tango.



LIGHTS, AVIONICS, ACTION! Everything you see in this cockpit is operational.

goofing around. (We, of course, admit to having some fun doing loops in the middle of Manhattan and admiring the city upside-down before we, uh, executed a safe approach into JFK.)

Other options include Dynamic Scenery, which creates other ground and air traffic; Detect Collisions, which solidifies buildings and other structures so you can't fly through

Avoid a Violent Death

STAY COORDINATED: At low altitudes and air speeds, center the ball in the turn coordinator instrument (using rudder control) to avoid stalling your aircraft.

HEAD FOR THE BARS: Don't overcorrect on final descent. Set the throttle and pitch attitude and keep the runway touchdown zone bars at a fixed distance off your aircraft's cowlings.

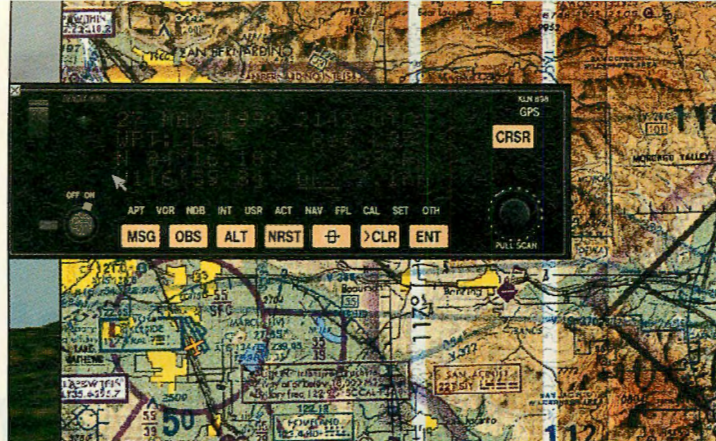
FLARE WITH FLAIR: Over the runway, use peripheral vision for guidance while you pull back on the controls and touch down.

SET YOUR PRIORITIES: Wherever you fly, remember to aviate first, then navigate, then communicate.

them (as if); and Gyro Drift, which makes gyroscopic instruments reflect realistic precession tendencies. Pilots can also place themselves in icing conditions and experiment with pitch and power settings and emergency procedures. Fly also lets you play Mother Nature: You can make winds variable at any velocity from 0 to 50 miles per hour (unfortunately it doesn't measure in knots), and set a peak level for gusts. The program can also adjust volumetric cloud cover (by altitude and formation), visibility, precipitation, and precipitation intensity.

The coolest weather feature, however, allows you to import actual METAR reports (Aviation Routine Weather Reports—blame the French for the acronym) from the National Weather Service. When you fly within 140 miles of a station, conditions change to reflect the actual weather report in the METAR you imported. The program does not include any practice instrument approach charts, nor can you (obviously) experience real-life physical disorientation in a simulator. However, the ability to lower visibility and create multiple cloud layers should still prove useful for people seeking instrument training.

Fly's Flight Planner, used in conjunction with GPS (a feature unique to Fly), extends the program's capabilities to a higher level. You can create a flight plan, choosing from over 9,500 airports worldwide. Arrange a flight from Nuuk Godthab, Greenland, to Pago Pago, American Samoa, and you'll immediately see it charted on the world map (and get a quick geography refresher course—though naturally *we* already knew where Pago Pago



POP-UP SECTIONAL CHART AND GPS windows help you pinpoint your exact location.

was). You can also set departure and arrival times. Fly sends all of this information to the GPS. From the Flight Planner screen, you can access the Setup Aircraft screen, where you'll find V-speeds (aircraft control speeds), rpm, and engine specs for whichever aircraft you're taking up. To a limited extent, you can also adjust your aircraft's weight and balance.

One feature unique to Fly is the alternate view camera. Take a look at your pitch attitude from outside the aircraft, or get a bird's-eye view of an uncoordinated stall evolving into a tailspin. The scalable satellite scenery provides good resolution even at low altitudes, making the quality of terrain detail remarkable. Of course, increasing detail decreases your system performance. A 3D accelerator card is obviously a definite plus—our blue-and-white G3's Rage 128 card gave us good results. The quality graphics combined with engine, ATC, and weather sounds make Fly truly exciting.

To get the most out of simulation, you

need to use hardware with realistic functionality. While Fly allows you to assign the *x* and *y* axes, rudder, mixture, trim, and throttle to particular controls on the joystick or input device you're using, you can only activate flaps (essential for controlled landings) with key commands or the mouse. This is awkward—and a surprising omission. You do, however, have the option to redefine key assignments, so you can personalize your control set to some extent, though the default commands are fairly intuitive and easy to remember. Unless you plan to pilot from the right seat of the plane, you may want to consider controlling the *x* and *y* axes with your left hand and the throttle and trim settings with your right, as you would in a real airplane.

The Fly manual devotes only a sixth of its bulk to operational instruction; the rest covers flying basics. The text is not outstanding, but it's adequate—and happily a keyboard control chart provides easy answers and shortcuts.

Though Fly has a multiplayer option, it plainly isn't traditional gaming software—it's designed for realistic flight simulation, so Quake 3 Arena and airborne military combat devotees should look elsewhere. Despite its limitations, Fly has several almost inexhaustible aspects. It is hard to imagine a simulator ever taking the place of real flight—but for a relatively small price, gamers willing to choke down a bit of technical information can enjoy multiplayer scenarios, novice pilots can nail some basic procedures, and experienced pilots can travel the world in instrument conditions without mortgaging their house. Not bad, not bad at all.—*Jenifer Morgan*

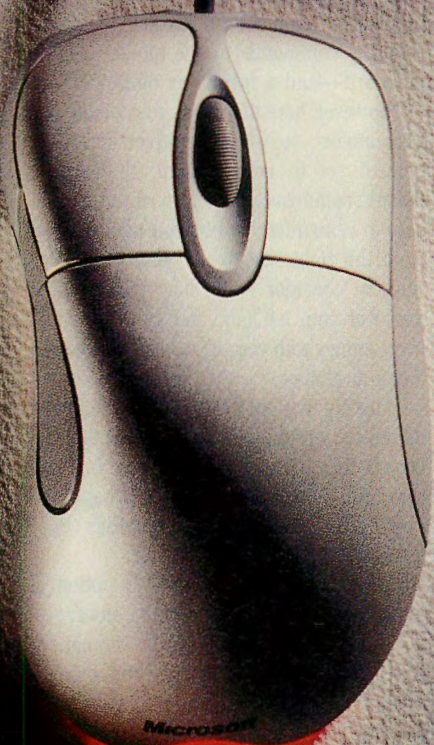
CONTROL OPTIONS includes a Null Zone feature, which allows you to adjust the sensitivity of your input device, creating a region around the center position that won't affect aircraft performance.



GOOD NEWS: Options to suit all levels. Amazing aircraft detail. Great scenery. Reasonably priced. Multiplayer option. **BAD NEWS:** Steep system requirements. No hardware controls available for flaps. Skippy ATC functionality. Limited instruction.



hollywood



reviews

Pocket Reader

HARDWARE

COMPANY: Siemens

CONTACT: 800-665-8445,

<http://www.pocketreader.com>

PRICE: \$169.95 (SRP)

REQUIREMENTS: PowerPC, System 7.5 or later, 2.4MB of RAM, 5MB of free hard disk space, 4X CD-ROM drive



READ IT AND WEEP? An accurate scan can take several tries if your book isn't perfectly flat or if you've had too much coffee. Weeping is optional.

On the just-plain-cool scale, the Pocket Reader scores big points. But as the hula-hoop has proved, cool does not always mean practical. Nor does it mean usable.

The Pocket Reader is a high-lighter-size, line-by-line scanner that runs on two AAA batteries and can save up to 40,000 characters at one time. To use the Pocket Reader, you simply hold the scanner upright, position the head over the line you want to scan, and run it over the text. When you're ready to import scanned text into your Mac, just plug the provided cable into your printer or modem serial port using a special Mac adapter, included with the Mac version. Launch the Pocket Reader software and click Load Text. The text downloads into a simplified word processing program, allowing you to edit, print, then erase what's stored in the reader.

Unfortunately, it sounds simpler than it actually is. If the Pocket Reader is at just a slight angle or if the book you're scanning is not quite flat, either you'll get an inaccurate scan or the device won't work at all. Even more difficult is keeping your hand steady as you scan an entire line—if you're a caffeine addict and you tend to drink too much morning coffee, this is not the product for you.

The actual scan is better than you would expect, but not good enough to satisfy. To get an accurate scan often takes several attempts. In particular the Pocket Reader seems to have problems with apostrophes, capital letters, and text that's not black. If you require perfection, you can use the arrow keys located on the Pocket Reader to move the cursor around on the LCD screen and delete words that didn't scan correctly or try to scan a problematic part of a line again. On the plus side, Pocket Reader recognizes five languages, including French and Spanish.

In an age where almost everything is digitized, it's hard to fathom needing to scan paper files, but certainly Pocket Reader is an appealing prospect for students, professors, lawyers, and others who do a lot of research offline and spend hours photocopying select passages from thick books. Unfortunately, the frustration of trying to scan a line accurately may very well make that copy machine seem tempting after all. —Cathy Lu

GOOD NEWS: Cool and portable. Scanning and downloading text is easy.

BAD NEWS: Unspectacular scanning quality. Scanning head is finicky. Product isn't super practical.



reviews

Noesys 2.0

PRODUCTIVITY

COMPANY: Research Systems

CONTACT: 303-786-9900,

<http://www.rsinc.com>

PRICE: \$495 (SRP), \$795 for Noesys

Plus, \$2,390 for Noesys+IDL

REQUIREMENTS: Power PC,

Mac OS 8.1 or later, 32MB of RAM,

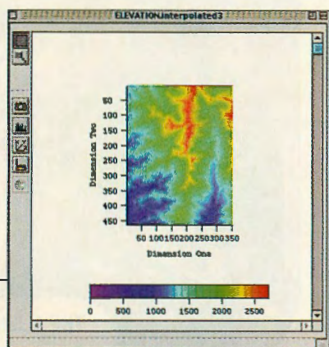
154MB of free hard disk space,

CD-ROM drive, color display

Imagine a sports car. Picture the aerodynamic form, the softly purring engine, and the suppleness of leather seats. Imagine climbing in, only to find that the manufacturers omitted the steering wheel and gear shift from your version of the car. Noesys gives you that same slow sinking sensation—a spectacularly awful port has made a complete hash of what ought to be a top-notch program.

Noesys is one of a very few scientific visualization software packages available on the Macintosh platform. Such software allows scientists and engineers to examine their data graphically, and is often crucial in understanding the results of an experiment or calculation.

Noesys is a study in contrasts. Its underlying architecture is very good. It supports a wide variety of otherwise difficult-to-use file formats; has full support for arrays with up to seven dimensions, and can plot using several types of map projections. The base version of Noesys 2.0 allows the user to import data sets into its integrated single-command version of IDL, which in turn lets the user bring a vast amount of processing power to bear on data sets. If using IDL one command at a time proves insufficient, RSI sells two higher-



THE SDTS DATA SET for this topographic map would be nearly impossible to decipher without Noesys. Due to the program's poor interface, though, it's still no picnic to read.

end versions of Noesys with fuller access to IDL.

Unfortunately, the port to Mac OS seems halfhearted at best. It's missing key features that the Windows version offers: Mac users have access to just a small fraction of the map types available to Windows-based scientists, and the Imager lacks the functionality of its Windows equivalent.

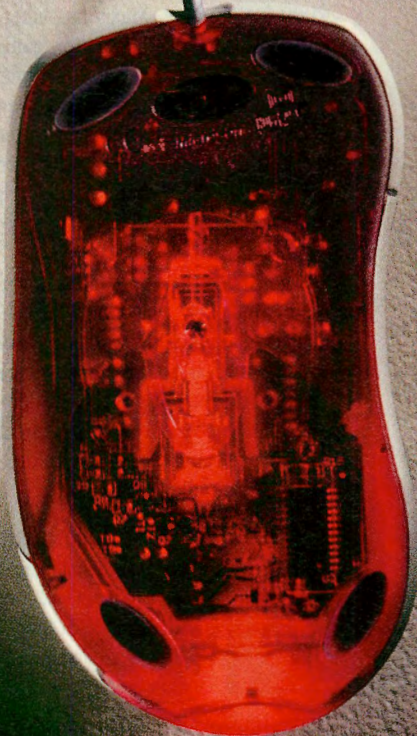
The user interface generally feels clumsy and difficult to use; most functions are accessible only through one of the least intuitive toolbars we've ever used. To add insult to injury, basic interface bugs remain: Scroll bars sometimes fail to work, and windows occasionally fail to refresh. The poor port is heartbreaking—it turns a potentially awesome product into one that's irritating to use. Research Systems (which distributes Noesys for Fortner Software, <http://www.fortner.com>) says the next Mac version will equal its Windows counterpart. We hope so—Noesys has too much potential to leave it in its current state.—Ian Sammis

GOOD NEWS: Integrated IDL. Support for many data types. Nice combination of visualization and analysis tools.

BAD NEWS: Profoundly awful porting



silicon valley



The IntelliMouse® Explorer looks different because it is.

Optical tracking turns the slightest movement into precise cursor action, without the use of a mouse ball—on Macintosh or Windows® based PCs.

It's like a blonde bombshell with a Ph.D.

Microsoft
Where do you want to go today?®



www.microsoft.com/mouse

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SimCity 3000

FUN & GAMES

COMPANY: Maxis

CONTACT: 800-336-2947 or 925-933-5630, <http://www.simcity.com>

PRICE: \$49.99 (SRP)

REQUIREMENTS: 180MHz PowerPC or faster (G3 recommended), System 7.5.3 or later (Mac OS 8.1 for G3), 32MB of RAM (64MB recommended), 260MB of free hard disk space (additional 128MB for virtual memory), 4X CD-ROM drive

Five years after the release of SimCity 2000 for the Mac, Maxis has taken its award-winning city simulation game to a new level. Added detail and complexity bring you closer still to the sights, sounds and chaos of running your very own teeming metropolis, but if you want a city simulation game that offers more playability and less gee-whiz flash, SimCity 3000 is a big disappointment.

For the first time, you can zoom in on your city so closely that you actually see your subjects (called Sims) living through the throes of daily life. They carry briefcases to work, wield protest signs during demonstrations and even run around in panic during an earthquake or alien invasion.

WHAT, NO SCROLL BARS?

Click a thumbnail map to go wherever you want instantly, or drag your way around in the main window.



Vastly improved audio conveys the excitement—and the peril—of city life. The brouhaha of riots and the sweet sounds of road rage have replaced the flat music of SimCity 2000. The game offers new and deeper advice from your city advisers and is generally far more interactive than any of its predecessors.

Now for SimCity 3000's fatal flaw: it doesn't actually run well on a Mac. It has weighty system requirements. The game dumps 260MB onto your hard drive, while heavy use of virtual memory pushes space requirements even higher. Count on saying good-

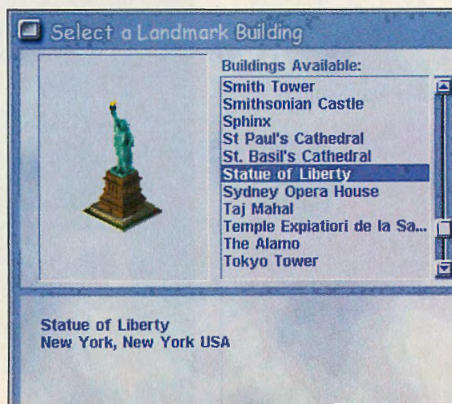
IF THEY CAN DO IT IN VEGAS... Decorate your town with everything from the Eiffel Tower to the Statue of Liberty or the White House.

bye to at least 390MB of your hard drive, even with the CD inserted during gameplay. (Maxis recommends you start up with only a basic set of system extensions to play the game.) SimCity 3000 is slower than molasses in winter, even when you play it on a G3. And despite serious emphasis on graphics and animation, the game does not use hardware acceleration, so a Voodoo or ATI card in your Mac won't help.

SimCity 3000 creates unique graphics for each side of a building—unlike SimCity 2000, which showed different angles of the same view—but at a cost. Dragging between city sections in any close-up mode shows you blue squares (dubbed “ice cubes”) until the program catches up and fills in the details. Depending on your machine's speed, you may face a frustrating wait.

If SimCity 3000 feels like a PC game, that's because it is. Maxis did not originally plan to make a Mac version. MacKiev, a company in Ukraine, conducted the port but unfortunately did a very poor job of constructing a Mac environment. A surprising number of Windows elements show up in SimCity 3000. Try to open a city file and you'll see what we mean. See that button for moving up one level in the folder hierarchy? That's right out of Windows.

While SimCity 3000 can theoretically import files created with SimCity 2000,



THE ALIENS HAVE LANDED! Run for cover when little green men set their sights on your city.



DETAILS, DETAILS. You now have a more detailed view of your city than ever before, right down to the pedestrians.

this feature is almost useless. First off, there is no Import button or menu item within SimCity 3000. Selecting Open does not allow recognition of the SimCity 2000 file unless you give it the DOS extension of .sc3 or drag the file onto the SimCity 3000 icon manually to open it. When it finally does open, you quickly see that it's not worth the effort. Too many items simply vanish—highways, roads, prisons, power plants, you name it. You end up with half a city and a whole lot of mysterious blank spots.

If you can ignore its many flaws and you have a superfast G3 or G4, you just might find SimCity 3000 enjoyable, but not if you own anything less than the latest and greatest Mac. As for us, we're going to stick with SimCity 2000 for another few years.—Mark D. Shuchat-Marx

GOOD NEWS: Many new features and capabilities. Loads of details with close-up zooming. Has the look and feel of really managing a city.

BAD NEWS: Slow even on a G3. Steep system requirements. Very un-Mac-like interface. Doesn't use graphics acceleration. Feature allowing import of SimCity 2000 cities is almost useless.



Action Menus

UTILITY

COMPANY: Power On Software

CONTACT: 800-344-9160 or 612-317-0344, <http://www.actionutilities.com>

PRICE: \$49.95 (SRP); \$39.95, download without printed documentation

REQUIREMENTS: Color-capable Mac, System 7.5.3 or later, 4MB of RAM

How have our Macs functioned so long without Action Menus? This simple control panel lets you define keyboard shortcuts for almost any menu item. Just that feature is worth the full price, but there's much more. Action Menus gives you the option of adding specialized menus. It allows customization of standard menus. Finally, it's as stable as bedrock.

You may want to buy Action Menus for this reason alone: It will boost your productivity by allowing you to assign your own easily remembered keyboard shortcuts to any menu item, even overriding a program's defaults. It's as simple as select-

CUSTOMIZE EVERY ASPECT of every menu in Action Menu's simple control panel.

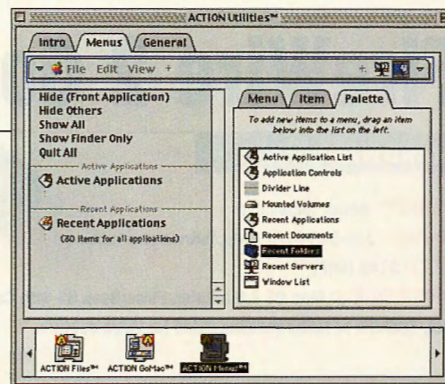
ing the menu item using the cursor as usual, then pressing the desired shortcut. The menu immediately displays your shortcut to the right. Repeat as needed to create, rearrange, or remove shortcuts until you have everything set up as you wish.

Action Menus also lets you alter the Apple and Applications menus with ease, and optionally add specialized menus for instant access to recent, favorite, and frequently used applications, documents, folders, servers, volumes, and windows. Wherever it makes sense, you can drag and

drop items directly onto menus, either to add them to the menus or to open them via applications listed there.

Although we couldn't test Power On Software's claim of Mac OS 9 compatibility, months of daily use under Mac OS 8.6 indicate that Action Menus is rock solid. Buy a copy today and start to make your Mac work your way.—Owen W. Linzmayer

GOOD NEWS: Boosts productivity.
Increases ease of use. Simple.
Cheap. Stable. **BAD NEWS:** None.



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reviews

FireWire 2 Go

HARDWARE

COMPANY: Newer Technology

CONTACT: 316-943-0222, <http://www.newertech.com>

PRICE: \$149 (SRP)

REQUIREMENTS: Mac OS 8.6 or later, PowerBook G3 with CardBus slot, 300MHz or faster recommended for video capture.



IT MAY BE A plain vanilla PC card package, but there's a fire inside, baby. Just plug the FireWire 2 Go card into your PowerBook G3, and set the world on fire. Not literally, of course.

PHOTOGRAPH BY AARON LAUER

When Apple released the thin Lombard PowerBooks back in the summer of 1999, there was one glaring omission—no FireWire on the motherboard. Newer Technology didn't wait too long to fill this gap with the FireWire 2 Go PC card.

The concept behind the FireWire 2 Go card is simple—just plunk the PC card into your PowerBook's PC Card slot, install the driver software, and you have a FireWire port that's ready to use just about any FireWire peripheral, including hard drives and digital video cameras. And, if your FireWire peripherals run at different speeds, that's no prob-

lem—the FireWire 2 Go can switch between 100, 200, and 400Mb devices on the fly.

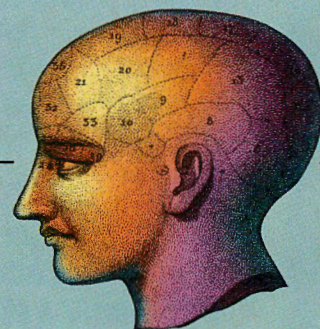
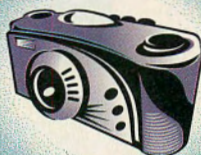
On a 400MHz PowerBook G3, the FireWire 2 Go card performed like a dream. We were able to use a couple of different FireWire hard drives (from VST and MacTell) without a hitch—the drives mounted and performed beautifully.

The prime incentive for installing FireWire on your PowerBook, though, has to be the ability to do digital video capture on the road. We used the FireWire 2 Go card to pull video from a Sony TRV900 digital video camera without a problem—no skipped frames.

Slower PowerBooks may not be able to keep up, so make sure that your PowerBook is 300MHz or faster if you're going to do DV.

If you own a fast PowerBook and you're jonsing for FireWire to do your digital video, then you should rush right out and buy the FireWire 2 Go card. For under \$150, you can join the FireWire-enabled elite and take your video show on the road.—David Reynolds

GOOD NEWS: Works as advertised. Easy to install and use. FireWire for under \$150. **BAD NEWS:** Should have been part of the PowerBook G3.



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YOUR DESKTOP PRINTER WITH
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Microsoft IntelliMouse Explorer

HARDWARE

COMPANY: Microsoft

CONTACT: 425-882-8080, <http://www.microsoft.com>

PRICE: \$74.95 (SRP)

REQUIREMENTS: Mac OS 8.5.1 or later, 15MB of free hard disk space, USB port

LOOK MA, NO BALL! The IntelliMouse Explorer's optical sensor delivers smoother mouse performance than a ball.



PHOTO COURTESY OF MICROSOFT

Microsoft's new USB mouse, the IntelliMouse Explorer, is what we've recently come to expect from Microsoft: It's a needlessly complex but otherwise terrific product.

The IntelliMouse works like a traditional mouse, but without a mouse ball. These new rodents are optical, not mechanical; they determine motion by repeatedly imaging the surface they're sliding along and comparing successive frames. This fly-by-sight feature keeps the IntelliMouse from getting clogged the way mechanical mice do—there's no ball constantly shoving mousepad detritus up into the innards of the device.

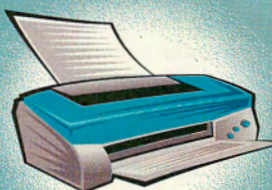
The IntelliPoint control panel is extremely well built. You can program all five buttons painlessly. The control panel cleverly assigns a straightforward click function to at least one button at all times, preventing users from painting themselves into a corner. Users can either go with the speed assigned in the Mouse control panel, or use the IntelliPoint slider to reach the supersonic speeds Windows types favor.

The IntelliMouse's only problems stem from Microsoft's near-insatiable urge to include more features than you could want. Though the three primary buttons are well positioned and easy to use, the thumb buttons

are easy to click by mistake but difficult to click by design. The ergonomic shape may appeal to right-handed users, but effectively prevents left-handed mousers from using the device. Still, once you learn to avoid the thumb buttons (or simply turn them off), the IntelliMouse is one of the best mice we've seen.—*Ian Sammis*

GOOD NEWS: Well-designed control panel. No mouse ball to gunk up.

BAD NEWS: From Microsoft. It's easy to trigger fourth and fifth mouse buttons by mistake. Strictly for right-handed use.



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and automatically adjusts your iMac so that what you see on the screen is what prints out on your printer. Perfect for Internet shopping and digital photography – wherever accurate, consistent color is important. ColorMatch

comes with a color calibrator in your choice of five iMac colors. So get color coordinated today. Visit www.radiusdisplays.com and find out where to get your ColorMatch for iMac.

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SmartScore 1.2

AUDIO

COMPANY: Musitek

CONTACT: 800-676-8055 or 805-646-8051, <http://www.musitek.com>,
<http://www.smartscore.com>

PRICE: \$399 (SRP), \$298 (street)

REQUIREMENTS: PowerPC or faster, Mac OS 8 or later, 32MB of RAM, 16MB of free hard disk space, QuickTime 3.0

SmartScore, Musitek's new music-scanning program, picks up where MIDIScan, its PC-only, award-winning predecessor, leaves off. While converting sheet music into MIDI tracks is music enough to most ears, SmartScore goes even further—adding improved scanning technology, basic MIDI edit, play, and record capabilities; and an extensive music notation interface.

Experienced transcriptionists, arrangers, and music directors will find enough here to keep them busy for a long time. SmartScore is great for converting complex scores into individual staves, parts, voices, and MIDI channels, and its precise editing tools are easy to use on even the most demanding score.

The intuitive, well-organized interface simplifies the task of editing scores or creating new ones from scratch with a mouse, a QWERTY keyboard, or an external MIDI keyboard controller. A 17-inch monitor comfortably fits the original scanned sheet music, the newly converted and editable ENF (Extended Notation Format) file, a scrolling piano-style MIDI note display, and an overall graphical arrangement view.

PRECISE NOTATION EDITING FEATURES and a scrolling piano roll provide traditionalists and MIDI musicians with the tools they need.

Besides the return-to-zero rewind control and the lack of MIDI file export capability, our only major complaint is SmartScore's lack of Macintosh-specific documentation for this cross-platform program. The included Macintosh user supplement addresses some of the differences, and the majority of menus, features, and tools are consistent across both platforms. However, the manual's use of Windows-only screen shots and wording conventions (like "right-click") lead to confusion and excessive menu surfing to find the Mac equivalents. Musitek acknowledges some documentation problems and expects to make a rewritten, Mac-friendlier version of the manual available before publication of this review.

Despite some documentation headaches, the manual incorporates many useful step-by-step tutorials that do a good job

of showing SmartScore's capabilities. For power users, Musitek has collaborated with Coda Music to allow direct importation of finished SmartScore ENF files into Finale, Coda's popular and comprehensive music notation program.

SmartScore offers a number of innovative features, such as the ability to separate polyphonic and contrapuntal voices into individual MIDI channels and to provide real-time MIDI control over a host of musical parameters. The software also supports general MIDI, MT32, RolandGS, YamahaXG, and standard numeric system instrument templates for connecting with any internal or external MIDI device. Its most welcome features include comprehensive controls over part and voice appearance and naming, staff and system spacing, and transposition. Printed-out pieces precisely represent crescendos, trills, triplets, and other musical nuances. A handy image information window provides control over file type, bits per pixel, and resolution settings for those looking to publish musical TIF files to the Web. The ability to use a basic pencil tool to make annotations directly on a new score, and the ability to save and print individual parts from a larger composition will make any music director's job a lot easier.—*Randy Alberts*

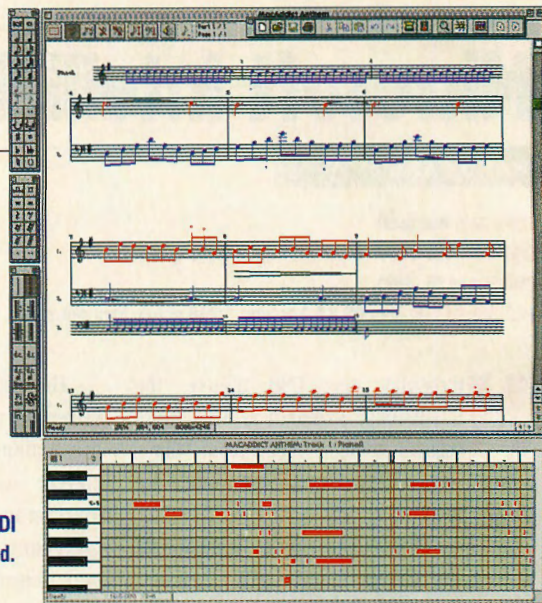
SCORE: A musical notation document, usually containing two or more instrument or voice parts that play together in a song.

STAFF: A group of five horizontal lines on which notes are placed to indicate pitch and timing.

CLEF SIGN: Placed at the beginning of every staff to indicate whether notes are in the bass or treble range.

KEY SIGNATURE: Placed next to the clef sign to indicate the musical key for notes on a staff.

MEASURE: A unit of musical time, dividing each staff into segments to provide timing structure.



GOOD NEWS: Accurately scans and converts printed sheet music into editable MIDI tracks. Assigns parts to individual MIDI channels. Easy to use.

BAD NEWS: Poor Macintosh documentation. Imports but doesn't export MIDI files. Unintuitive rewind transport control.



Starry Night Pro 3

FUN & GAMES

COMPANY: Sienna Software

CONTACT: 877-278-7666 or 416-410-0259,

<http://www.siennasoft.com/english/pro.shtml>

PRICE: \$149 (SRP), \$130 (street); \$115 upgrade for registered users of Starry Night Basic, \$60 upgrade for registered users of Starry Night Deluxe

REQUIREMENTS: PowerPC or faster, System 7.5 or later, 24MB of RAM, 50MB to 75MB free hard disk space (100MB recommended), 256-color monitor, CD-ROM

Sienna's Starry Night Pro 3.0 offers a full-featured planetarium in your Mac, and the doors are always open. With the click of a mouse, you can place yourself on Earth or drift in space 20,000 light-years from home. View the stars right now or from any other point in time between 4713 B.C. and 9999 A.D. Whether you're a big-city slicker wanting to view stars instead of streetlights or a parent teaching your child about astronomy, Starry Night Pro is a worthwhile program.

With 19 million stars and 70,000 additional galaxies, Starry Night Pro is the most advanced product in Sienna's astronomy line. The program is a major step up from the shareware version of Starry Night Basic and the commercial Starry Night Deluxe available for those who don't need all of Pro's features.

Starry Night Pro's impressive capabilities begin with displays based on painstakingly accurate astronomical data from European Space Agency databases. You can move forward in real time or you can time-travel by units ranging from seconds to years. You can track just about anything in the sky, viewing its position from Earth or

from space with an update every day, every hour, or even every minute. You can magnify any image to get beautiful close-up views of planets or nebulae or "turn off" the sun to view daytime events.

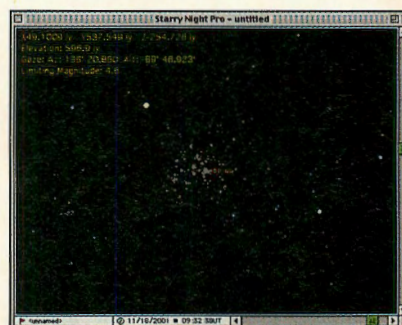
The CD comes with thousands of preset files showing solar and lunar eclipses from 1501 to 2500 A.D. Just select one, put yourself in the eclipse path, and watch the sky darken. You can even position yourself a million miles high, run the animation forward or backward at any interval, and watch the eclipse in action. Healing childhood memories of rained-out eclipse viewings, this feature is our personal favorite.

If you use Starry Night outside, you can put the program into "night vision" mode, giving your screen a deep red color that won't interfere with your ability to see at night. With the right cable, you can even hook your computer to a Meade LX-200 telescope and put it under computer control. (The CD gives instructions on how to make an appropriate cable if you don't have one.)

Starry Night's system requirements are reasonable and well within the reach of most Mac users, even without the latest and greatest equipment. In addition, you don't have to keep the CD in the drive while you are using the program, although running the program with the CD enables you to see stars far too faint for the naked eye or even a small telescope.

One of Starry Night's strengths is the option to update its comet, asteroid, or satellite files through an Internet connection. Sienna's LiveSky

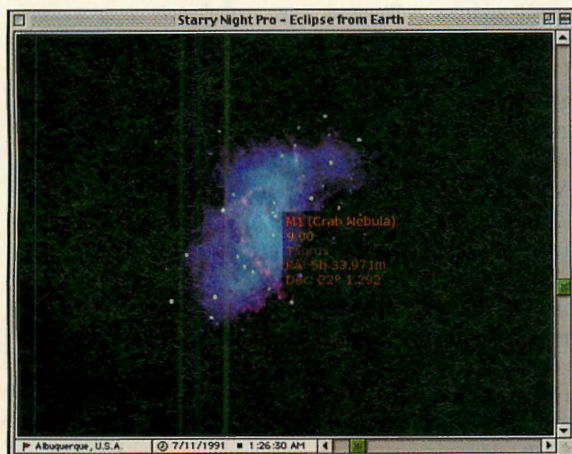
A MOON WITH A VIEW—Starry Night provides spectacular close-up views of the planets and moons in our solar system.



WARP SPEED, MR. SCOTT. You can fly through space to any location within 20,000 light years of Earth.

Web site (<http://www.livesky.com>) can help you find out what's happening in the night sky or search other Internet astronomy resources. Several astronomy sites have privately developed Starry Night plug-ins showing meteor showers, supernova remnants, and so on. Unfortunately, if they were designed for earlier versions of the program, Starry Night can't use them. We hope Sienna will fix this oversight in a future version.

Our only real gripe is that the manual skips a few important features, such as saving QuickTime animations of stellar events, provided you use the version of QuickTime 4 that comes on the CD. But overall—with sharp, clear visuals, scrupulous attention to detail, and eternally clear skies—Starry Night Pro is an excellent program that will satisfy the stargazer in all of us.—Mark D. Shuchat-Marx



STARRY NIGHT PROVIDES DETAILED INFORMATION about all planets, stars, nebulae, and galaxies visible from Earth.

GOOD NEWS: Remarkable accuracy.

Sharp, clear pictures. Can connect to a telescope for computer control.

Works with Internet astronomy

resources. **BAD NEWS:** Manual omits a few things.

Program can't use plug-ins developed for earlier versions of Starry Night.





Virtual PC 3.0

UTILITY

COMPANY: Connectix

CONTACT: 800-950-5880 or 650-571-5100, <http://www.connectix.com>

PRICE: \$179 (SRP), \$170 (street)

REQUIREMENTS: G3 with upgrade cards, Mac OS 8 or later (Mac OS 9 for USB support), 64MB of RAM, 320MB of free hard disk space

If you absolutely, positively have to use a Windows machine, why not use it on your Mac? That's the question Connectix Virtual PC 3.0 poses, and if you have a G3-based machine, the latest version of this PC Windows 98 emulator may very well provide your answer.

Virtual PC introduces a grocery list of new features, including USB support, shared IP networking, faster network speed, improved sound support, faster disc performance, and AppleScript support.

The USB compatibility alone may be worth the upgrade price, as it adds a tremendous amount of device support previously unavailable. Virtual PC has traditionally lacked support for external SCSI devices. You simply couldn't access an external CD-R through Windows. With USB support, however, you can use scanners, printers, and other removable media as easily as if you had a genuine PC, though you must first install Windows 98 drivers.

Connectix has a skimpy list of tested USB products, so we tested some additional devices, which were cross platform and either came with the Windows drivers

on CD or were readily downloadable. All but one ran perfectly in Virtual PC. An AGFA digital camera didn't work; according to some Usenet reports, it has trouble with PC USB connectivity as well.

Connectix brings you IP Sharing, a much

HAVE YOUR CAKE AND EAT IT, TOO. Run Windows 98 without giving up your Apple. Virtual PC allows you to run Win versions of everything from Internet Explorer to Photoshop on your Mac.

prefer, you can access previous versions of Virtual PC's networking features from the preferences.

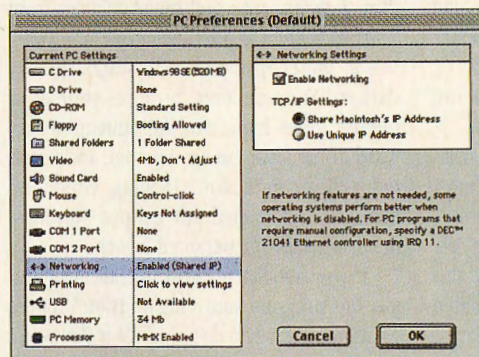
While Virtual PC offers little in the way of Windows-specific speed boosts, the program has improved networking and drive speeds. Network copying through Virtual PC was on average 10 to 30 percent faster than in version 2.5. The same files copied using an assigned IP were about 3 to 5 percent faster than via a shared IP. Virtual PC also improves drive access speeds, making Windows boot times and file opening faster, but speeds are still not nearly as fast as on a real PC or on your Mac.

Windows-emulating programs have always had serious speed limitations, as they create a virtual PC disc on your hard drive where they store the Windows OS and all Windows apps. Virtual PC is no exception—the disc emulation process can make performance dog slow, even on a fast drive.

Virtual PC adds a pretty good list of features to an already robust program. USB support and IP sharing would have made a compelling upgrade on their own. The other new features and speed improvements are icing on the cake. Virtual PC makes running Windows easier on your Mac than on a PC and earns every bit of a Freakin' Awesome. —Rick Sanchez

GOOD NEWS: USB support. IP Sharing. AppleScript support. Improved network speed.

BAD NEWS: Still no SCSI support. Drive speed is improved, but still slow.



WINDOWS NETWORKING IS EASIER thanks to IP sharing, which allows your Mac's Internet connection to double as your Windows hookup.

better way to deliver Net connectivity to Windows. While earlier versions of Virtual PC allowed you to access a network from within Windows, you usually needed a system administrator and a unique IP address if you were on a LAN. If you used a modem, you had to go through the very tedious process of setting it up through Windows.

With IP Sharing, once your Mac establishes an IP connection through network log-in or modem connection, Virtual PC recognizes and shares the IP address with the Windows program it's running—whether you choose 95, 98, or NT. The control for IP Sharing is in the Networking panel of Virtual PC's preferences, so you never have to tinker in Windows to establish a connection.

The advantages of IP Sharing are pretty strong. On a cable modem or DSL, you don't need to pay for a second IP address. On a LAN assigning dynamic IPs, Virtual PC recognizes the IP for your Mac. If you

Script

Open Scripts Folder
Open Script Editor

Open Calculator
Open Hearts
Open Keyboard Character Map
Open Minesweeper
Open Notepad
Open Paint
Open ScanDisk
Open Solitaire
Share a Folder
Type "Hello my friend."

WINDOWS 98 FINALLY GETS APPLESCRIPT support—as long as you are running it on a Mac.



Carmen Sandiego's ThinkQuick Challenge

FUN & GAMES

COMPANY: The Learning Company

CONTACT: 800-973-5111, <http://www.learningco.com>

PRICE: \$29.95 (SRP)

REQUIREMENTS: PowerPC, System 7.5.1 or later, 16MB of RAM, 30MB of free hard disk space, 4X CD-ROM drive

AFTER YOU TRAVEL THE WORLD and answer the questions, it's time to decode the lock and capture the villains.



The elusive Carmen Sandiego is back in ThinkQuick Challenge, the latest in the venerable children's software series from The Learning Company. Contrary to expectations, ThinkQuick Challenge, for kids ages 8 to 12, is a mediocre program full of less-than-impressive features and grating sound bites.

The goal of the game is to traverse the world, outsmarting Carmen and her band of accomplices. In an international hot spot of your choosing, you play a quick game, then

face Carmen's band of KnowBot robots. You defeat them by answering questions in two subjects from a selection including arts, history, math, and English. When you answer six to ten questions correctly, you gain access to the villain's hideaway, where you must crack a code in order to capture the thief.

Sound fun? It is—for about an hour. It's easy to get sick of the same games and repetitive "hip" dialogue. Even worse, questions you already answered correctly can resurface in the course of a game, and villains you

already caught free themselves inexplicably and turn up again.

ThinkQuick does add some spice with multiplayer games, three levels of difficulty, and entertaining graphics but overall, this is one Carmen Sandiego product you may want to elude.—Cathy Lu

GOOD NEWS: Multiplayer capability.

Lets you adjust difficulty during

game. **BAD NEWS:** Questions, dialogue, and activities get repetitive.



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Norton Utilities 5.0

UTILITY

COMPANY: Symantec

CONTACT: 800-441-7234 or 408-253-9600, <http://www.symantec.com>

PRICE: \$99.85 (SRP), \$49.85 upgrade

REQUIREMENTS: PowerPC, Mac OS 8 or later, 24MB of RAM, 16MB of available hard disk space, CD-ROM, modem or Internet connection for LiveUpdate functionality

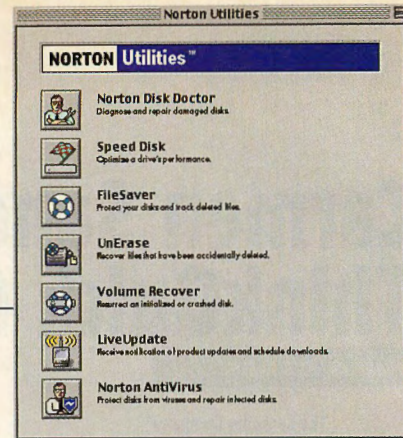
Peter Norton returns in Norton Utilities 5.0, Symantec's popular disk-repair software. The upgrade boots up from your ailing drive, downloads software updates, and offers FireWire support. But unless you crave one of these fixes, at \$50 this upgrade is not a must-have.

The Norton Utilities interface looks basically the same, but Symantec has added three major features. The new Live Repair lets you run Disk Doctor from the drive you're repairing. This makes the process faster and more convenient than working from a bootable CD. LiveUpdate downloads

software updates via the Internet. The interface offers custom and regularly scheduled updates, freeing you from the tiresome burden of digging them up yourself. Lastly, FireWire enthusiasts will be thrilled to find that Norton Utilities supports these devices.

Three lighter enhancements make Norton Utilities more user-friendly. Symantec has added the ever-popular Undo command for users who wish to back out of complicated problems and restore the hard drive to its original corrupted state.

UnErase has been revamped with an enhanced filter list and the option to restore



NORTON UTILITIES RETURNS with a faster, more convenient, though not revolutionary upgrade.

folders. Symantec has also added access to Norton AntiVirus directly from the main interface, provided that users have the latest version (6.0).

If you need FireWire support or if you've got money to burn, Norton Utilities adds convenience and a few new features. If not, don't sweat it.—*Narasu Rebbapragada*

GOOD NEWS: FireWire support.

Faster because Norton Utilities 5.0

boots up off the drive you're repairing.

One-touch Internet access to software

updates. **BAD NEWS:** No revolutionary changes.




See different.
(Much better, that is.)



Presenting 3M's new Anti-Glare/Anti-Radiation Filters for translucent Macs

Screen glare. What could be more irritating? It can cause all sorts of discomfort—from eyestrain and blurred vision to headaches and neck aches.

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Norton AntiVirus 6.0

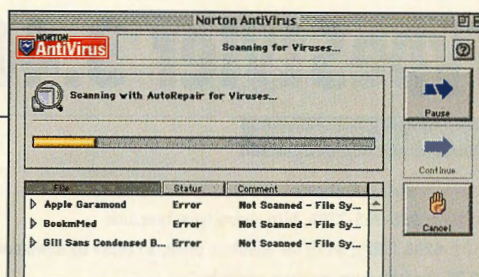
UTILITY

COMPANY: Symantec

CONTACT: 800-441-7234 or 541-334-6054, <http://www.symantec.com>

PRICE: \$69.95 (street), \$29.95 upgrade

REQUIREMENTS: PowerPC processor, Mac OS 8 or later, 24MB of RAM, 10MB of free hard disk space, CD-ROM drive, Internet connection or modem required for LiveUpdate



HUNTING FOR VIRUSES is much more appealing when you can scan your whole hard disk in 30 seconds.

They say if it ain't broke don't fix it. With no dramatic new developments in the field of computer virus creation, and the threat mostly limited to Microsoft Office macro viruses, this year's revision of Norton AntiVirus is really just a refinement of version 5—a nip here, a tuck there, a little performance boost, a bit of interface work. Owners of version 5 may decline to shell out another \$30 for these incremental improvements, but the product itself remains an effective and convenient antiviral tool.

Though version 6 is only a little faster at scanning your disks and folders for traces of

viral taint, even a small speedup can be a powerful inducement to maintain good antiviral habits. The first scan of a given volume is still ponderously slow, but follow-up checks are relatively painless; rescanning a 4GB iMac hard disk takes only 30 seconds, which scarcely qualifies as an inconvenience. Dealing with removable media is still aggravating, at least during the tedious initial scan. A fully loaded Zip disk can take a full two minutes to inspect the first time round.

Symantec also refined other features. The LiveUpdate function can grab applica-

tion updates as well as new virus definitions over the Internet. Throw in a bit of Norton Utilities integration, and you have an essentially minor update to an already pretty solid product. As long as Symantec keeps updating version 5's virus definitions, those who already own the last version needn't rush right out and upgrade.—*Mark Simmons*

GOOD NEWS: Increased speed and greater convenience.

BAD NEWS: No more 68040 or System 7 support. No new features.



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AppleWorks 5.0	6	Photoshop 5.5	
Color Management	1	New Features	2
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FileMaker Pro 5.0	6	Premiere 5.1	5
FreeHand 8.0	6	QuarkXPress 4.0	4
Graphics & PrePress	1	QuickTime/VR	2
Illustrator 8.0	6	Retouching	1
iMac	1	Scanning & Halftones	1
InDesign	5	Troubleshooting Mac OS	4
Internet Explorer 4.5	1	VectorWorks	5
Layouts & Output	1	Website Development	
Mac OS 9	4	Made Easy	3
Netscape Navigator 4.6	1	Word 98	6

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reviews

TypeStyler 3.46.3

DESIGN & GRAPHICS

COMPANY: Strider Software

CONTACT: 906-863-7798, <http://www.typestyler.com>

PRICE: \$295 (SRP), \$149 introductory price, \$119.95 by download, \$89.95 upgrade from previous versions

REQUIREMENTS: PowerPC (G3 recommended), 18MB of RAM (48MB recommended), 60MB free hard disk space (100MB recommended)



GOOD, BAD, OR JUST PLAIN CHEESE, TypeStyler makes creating styles easy as you please.

On first launch, the revamped TypeStyler 3.46.3 looks like the old floppy disk favorite we've known for years. However, as with other high-end design tools, the magic lies in a new object editor (Style Workshop). That's right, TypeStyler is fully object-oriented, so you can save your house style and impose it on all associated graphics with little or no effort.

Beginners can learn the basics of point-and-click style application with 71 prefab Styles. At this level, styling is as easy as picking font types, shapes, and Styles from the main

menu or the toolbar-invoked Attributes window. Once your object is on the page, you can rotate, scale, and shape it wholesale, or apply the Object menu's Create Outlines to shape letters individually.

Pros will dive right into Style Workshop to modify any aspect of Styles with the handy visual sliders and instant preview. You can then save custom Styles to the Library, where they'll be available for one-click use on other text and graphical objects.

TypeStyler's flexibility doesn't stop there. Once you've created the perfect logo, banner, button, or combination thereof, you're just a drag-and-drop away from almost any other design tool, including Illustrator, Quark, Flash, Photoshop, QuickTime, and PDF authoring. That flexibility goes both ways—import graphics into TypeStyler for backdrops and Panels that you can style, or into Style Workshop as text fill and shadow patterns.

Serious design tools are adapting to the Web these days, and TypeStyler is no exception. The new Web menu puts animated GIFs and JavaScript interactivity in easy reach—just highlight the object and pick an item from the Web menu. TypeStyler does the rest.

The drawback to this insanely easy Web production is TypeStyler's less-than-efficient HTML and JavaScript. A simple rollover button generates 12K of JavaScript. Hand-coded script would use just a kilobyte or two of file space. But the bulky generated code does play well across various Web browsers.

When exporting a GIF for Web use, TypeStyler gives you complete control over the color palette and bit depth. It's easier to use than Photoshop for squeezing out optimized GIFs. It's just as smart when exporting JPEG, PICT, TIFF, EPS, and Photoshop files, offering the appropriate compression, alpha masking, clipping path, and layer options.

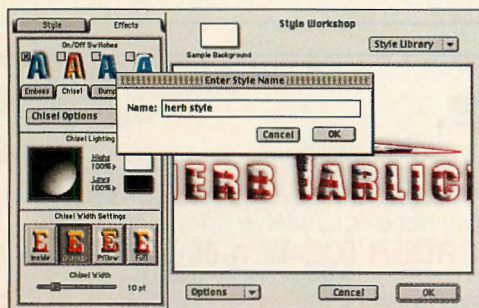
TypeStyler is no Photoshop-killer, but it does make designing eye-popping text effects infinitely easier and more fun. —*Niko Coucouvanis*

GOOD NEWS: Object oriented for convenience. Plays well with other design tools. Web-savvy graphics optimization. Way fun.

BAD NEWS: Great potential for abuse. Time-suck for the indecisive. Inefficient scripting and coding for the Web. Spartan interface.

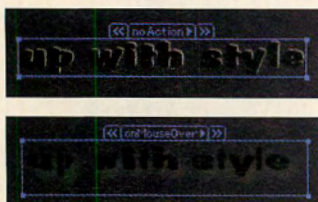


FIND A TRIAL of TypeStyler 3 on The Disc.

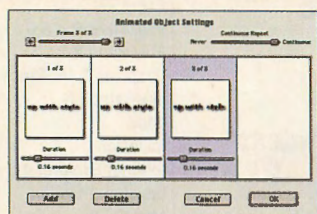


ONCE WE'VE SAVED OUR CUSTOMIZED VARIATION of the Stars & Stripes Style, we can access it in the Style Library and under the main menu's Style heading.

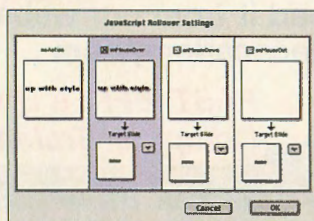
Styling with the Web Menu



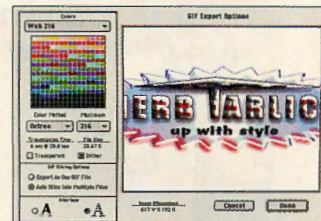
1 Marque de Web
After we apply Style Over, the object's marque becomes a console. The center tab hides a pull-down menu for jumping to a frame or button state and setting URL links.



2 Action
Use the Animated Object Settings window for looping and to add frames and set frame delays. To edit a frame, select it from the pull-down menu described in Step 1.



3 Mouse Action
Use JavaScript Rollover Settings to add or remove frames associated with linked rollovers. To add the Web link, use the pulldown menu in Step 1.



4 Export
Select Web Settings from the File menu and shrink those GIFs as much as possible for speedy delivery.

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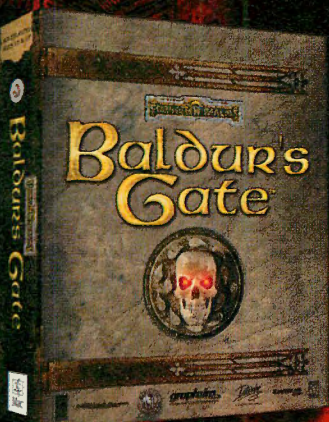
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Toast 4 Deluxe



PRODUCTIVITY

COMPANY: Adaptec

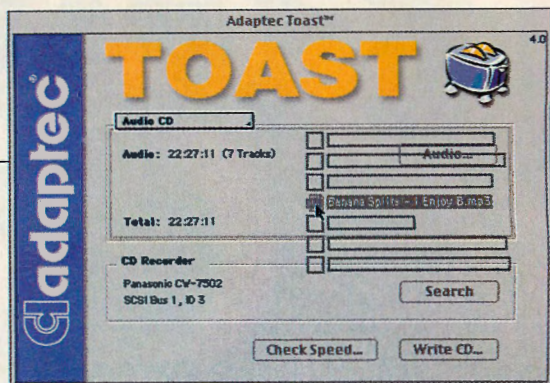
CONTACT: 800-442-7274 or 408-957-7274,

<http://www.adaptec.com>

PRICE: \$99 (SRP)

REQUIREMENTS: 68040 or faster, System 7.5.1 or later,
8MB of RAM, 12MB of free hard disk space, QuickTime 3.0 or later

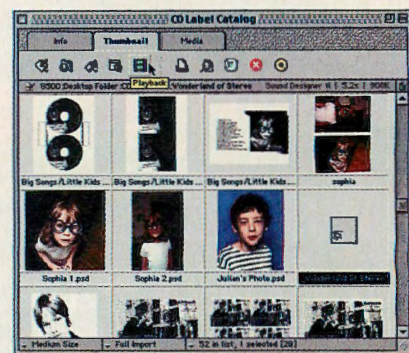
**VERSION 4 KEEPS
TOAST'S original drag-
and-drop interface.**



Once upon a time, Adaptec Toast took audio or data files and burned them onto CD-R media. That was it. Today, Toast 4 Deluxe still does that job admirably, but also adds a sorely needed Disc-At-Once recording feature (permitting zero-length gaps between audio tracks), smooths out some interface quirks, retrieves CDDB audio album and track names from the Internet, and sup-

ports a wider range of CD-R drives, including USB and IDE drives.

Toast 4's most impressive addition is its ability to turn MP3 and Liquid Audio files into audio CD files in one step, though the process takes a lot of horsepower—you'll need a 300MHz G3 Mac to record at 4X speed. In addition, Toast's handling of MP3 proves a little flaky. Our mono MP3 tunes played at double speed, sounding like the



**DRAG AND DROP FOLDERS, volumes, and files
onto PhotoRelay's window to create a complete
catalog of multimedia files.**

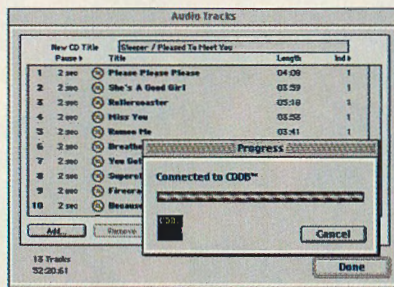
Toast Points for Audio CDs

NAMING TUNES: Creating a label for your audio CD? Select and copy all the tracks in Toast's Audio Tracks window, then paste them onto your label template. Toast lists each track's number, title, and time.

SILENCING HICCUPS: Toast's new Disc-At-Once capability means no more hiccup between contiguous tracks (if your hardware supports this feature). Select all tracks in the Audio Track window, then choose a zero-second gap length from the pop-up menu.

AUDIO COCKTAIL: You can mix all types of audio files when burning a single CD—MP3, Liquid Audio, AIFF files, and tracks on CD.

FASTER, MAC: If your converted MP3 tracks have noise and clicks, some part of your setup isn't fast enough to convert the files on the fly. You need a faster Mac or less interference from other operations like file sharing.



**YOU CAN ADD TRACK AND ALBUM NAMES
for almost every CD ever released—it takes
just the click of a button.**

Chipmunks, and one track grew a ten-minute silent ending. Toast also complained that a couple of MP3 files we downloaded from the Net weren't MP3 format, though another utility had no trouble converting them.

The second of Toast's bundle of three applications aiming to address all your CD-burning needs is CD Spin Doctor. Music fans can use CD Spin Doctor to turn a vinyl record, radio broadcast, or cassette into an audio CD. Spin Doctor easily converted our vintage 1962 Esquivel "Latinesque" LP and automatically marked the tracks. The noise and pop filters aren't as refined or flexible as those of Arboretum's Ray Gun, on which they're based, but they work.

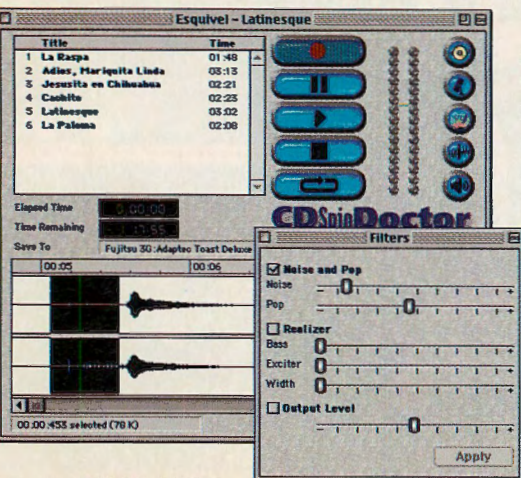
**SQUELCH POPS AND NOISES from vinyl
and cassettes—preview the results by
fiddling with the sliders.**

Spin Doctor won't satisfy picky audiophile snobs. For example, you can't create cross-fades, as with Adaptec Jam, or perform other tweaks, as with Bias Peak. However, it does a fine job a lot more conveniently than the alternative: a handful of expensive stand-alone applications.

The third application, PhotoRelay, automatically catalogs all sorts of graphic, QuickTime, font, and audio files while preserving a thumbnail view and searchable info. PhotoRelay lets you manipulate thumbnails, import via filters, annotate and label files, and export in several formats, including HTML for creating Web page photo albums. A single keystroke will send selected local files, ready for burning, to Toast.

Toast 4 addresses the most annoying limitations of previous versions, and the addition of Spin Doctor and PhotoRelay make the package a well-rounded CD-burning solution for the home user.

—Joseph O. Holmes



GOOD NEWS: Transfer vinyl or
cassette to CD in a few simple
steps. Terrific multimedia cataloger.
Disc-At-Once recording. **BAD NEWS:**
MP3 burning is flaky. Limited audio editing.



reviews

FileMaker Pro 5.0

PRODUCTIVITY

COMPANY: FileMaker

CONTACT: 408-987-7000, <http://www.filemaker.com>

PRICE: \$249 (SRP), \$149 upgrade

REQUIREMENTS: PowerPC processor, Mac OS 7.6.1 or later, 16MB of RAM, TCP/IP or AppleTalk network connection required for sharing databases

The last version of FileMaker Pro was a bit of a disappointment for longtime fans of this lovably approachable database—it seemed as if all the developers' energy had gone into the (admittedly clever) Web publishing features, while the rest of the program was more or less ignored. Version 5.0, thankfully, is a far more comprehensive update that makes useful improvements to every one of FileMaker's features. For first-time users, it remains a delightful tool that we recommend without reservation. But this time, owners of previous versions also have reason to celebrate.

The first thing you'll notice about FileMaker Pro is that the application's interface has been remodeled to make it more comprehensible to new users. We can take or leave the Microsoft Office-style toolbar, but the menu reorganization is long overdue—what was Delete Record doing in the Mode menu all those years, anyway? Throw in resizable dialog boxes, improved contextual menus, and support for Apple's newfangled Navigation Services' open-and-save dialogs, and you have the model of a well-designed Mac application.

Another bonus for users is an ingenious Layout/Report Assistant. Rather than cramming data into pre-fab templates, this handy step-by-step assistant walks you through the complex process of building grouped reports with fancy headers, footers, and summary fields—a tricky task even for experienced FileMaker users. You can select from a number of layout themes—combinations of colors, fonts, and graphic elements that lend a consistent style to your database. Themes are also used by the improved, style-savvy Web Companion, so your layouts keep their look and feel in a Web browser.

Database authors will also welcome FileMaker Pro's new value list options. You can reuse value



THEME-SAVVY WEB PUBLISHING gives you a fancy online presentation automatically!

DATABASE OR SPREADSHEET? Table View offers the best of both worlds.

lists from other databases, and do some very cool stuff using value lists based on database fields. But heads up—older FileMaker databases will need updating to the new file format. In other layout news, you can apply crude engraving, embossing and drop shadow effects to fields. There's also a View As Table option, which displays your layout in a multicolumn spreadsheet format; it's not very pretty, but it's a lot less hassle than creating a columnar layout on the spur of the moment.

Rounding out the list of improvements are a slew of other long-awaited tweaks, including the ability to import scripts from other databases and a Web-safe color palette. There's even a primitive data-updating feature you can use to synchronize databases, though it's complicated and poses a high risk of inadvertently mangling data. We hope this will be further streamlined in future releases.

There's only one cloud on the horizon. As of version 5.0, the FileMaker product line is splitting into four separate products—this is the cheapest and the first to arrive. As the low end of the database line, the basic Pro now has a ten-user limit for both network and Web access—and to prove it's serious, FileMaker Inc.'s license prohibits the use of CGI and Web gateways like Blue World's Lasso that could be used to circumvent this restriction. If you need to serve more than 10 users, you'll have to hold out for the \$999 FileMaker Pro Unlimited, due later this year. For small-time databasers, however, FileMaker Pro 5.0 is a solid revision that further boosts the program's already superb flexibility and ease of use.—*Mark Simmons*

GOOD NEWS: Really useful layout assistant. Web-published databases look a lot better. New value list options are boss. **BAD NEWS:** Data updating feature needs work. Ten-user access limit.



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7100/66 8/1 Gb/CD	\$269	Great selection of 6 PCI slot Macs: 9500s, 9600s, and a special Umax \$900 Blowout!	
7200/75 32/500/CD	\$269	Factory Refurbished Macs	
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7200/90 40/500/CD	\$349	"Blue & White" 350 64/6/CD	\$1199
4400/200 16/2 Gb/CD	\$429	"Beige" 300 64/8/CD/AV	\$1649
7500/100 24/1 Gb/CD	\$499	"Blue & White" 450 128/9/CD	\$1799
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SnapScan Touch scanner

HARDWARE

COMPANY: Agfa

Contact: 800-879-2432, <http://www.agfa.com>

PRICE: \$129 (SRP); \$127.63 (street)

REQUIREMENTS: USB-equipped Macintosh



PHOTO BY AARON LAUER

Agfa's SnapScan Touch may as well have been called the scanner for dummies—you don't need any scanning experience to create good-looking scans within minutes of yanking the flatbed out of the box. The touch-button hardware design, coupled with intuitive software, makes scanning simple.

The four-button paw on the top corner of the scanner comes preconfigured for four separate functions. You can scan an image into the scanning software for editing, scan and send an image directly to your printer, scan a text document directly into a word processor, or scan an image and attach it to a new email that it creates. If none of these options really matches your scanning needs, you can reconfigure the three smaller buttons to perform other tasks—like scanning an image directly into a Web browser—on the fly.

YOU'LL WANT TO REACH OUT and just touch its buttons.

Once you've scanned your image into the scanner's ScanWise software, you can opt for the guided tour or go ahead and figure out the process on your own. The software is organized into four logically ordered tabs that ask you to select the type of image you're scanning (glossy photo, magazine, and so on), select a destination for the image (Photoshop, AppleWorks, and so forth), tweak image settings, and then set the dimensions at which you want the image to appear. Finally, you press the big red Scan button, and you're good to go. The entire process is extremely straightforward.

In the Image Control panel, you're allowed to adjust image settings manually with

slider controls or click a

box to activate ScanWise's PhotoGenie, which is supposed to optimize the detail and color balance of your image. Although PhotoGenie helps some images (slightly), it actually makes others look worse. If you have the time and are willing to experiment, your best bet is to play with the settings until you get results that look good to you. If you have Photoshop, you can get even better results with the program's more advanced tools.

The nondescript beige scanner gets a dash of color from removable handles that attach to the ice-colored lid. The scanner ships with handles in any of the five iMac fruit flavors—though there's no graphite choice yet. It also comes bundled with MicroFrontier's Color It Image editing software and Caere's OmniPage LE 5.1 OCR software, which lets you scan text easily into editable documents. The SnapScan Touch has a scanning area of 8.5 by 11.7 inches, an adequate maximum resolution of 600 by 1,200 ppi (which it can interpolate up to 9,600 ppi), and 36-bit color depth.

The pictures we scanned looked great. Although the color reproductions weren't dead-on compared to the originals, they were very close—good enough for most home projects. At a mere \$129, you definitely get more than your money's worth. The Agfa SnapScan Touch's low price, simple software, convenient scanning buttons, and quality output make it a solid buy anyone could appreciate.—Nikki Echler

Genie in a Bottle, Baby

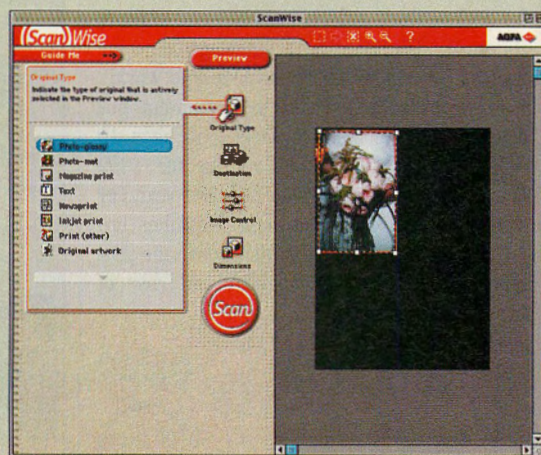


WITHOUT PHOTOGENIE



WITH PHOTOGENIE

Agfa's PhotoGenie is supposed to make your photos miraculously look their best without forcing you to do any work. Although the photo PhotoGenie has worked over in this comparison actually improves the skin tone of this picture, it still looks a little jaundiced.



SCANNING SOFTWARE SO SIMPLE your dog could use it.

GOOD NEWS: Inexpensive. Easy-to-use scanning software. Great-looking scans. **BAD NEWS:** You can reconfigure three of the buttons, but you can't change their icons—a nitpicky complaint.



reviews

MacDrive 98 3.1

UTILITY

COMPANY: Media4 Productions

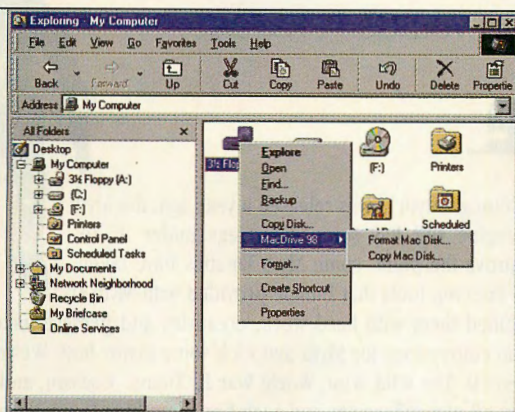
CONTACT: 515-225-7409,

<http://www.media4.com>

PRICE: \$64.97 (SRP); upgrade, \$21.97 (free if purchased after March 31, 1999)

REQUIREMENTS: Any PC running

Windows 95, 98, or NT



THE MACDRIVE POP-UP MENU allows Windows users to format and copy Mac disks.

Why, you may ask, is *MacAddict* reviewing a PC program? Because there is just no denying that Macs have to fit into the Windows world. Since the introduction of the 1.4MB SuperDrive on the Mac SE, Apple aficionados have been able to read PC disks, but insert a Mac-formatted floppy into a PC, and you get the Windows equivalent of "huh?". Media4's MacDrive 98 adds seamless Mac disk awareness to Windows 95, 98, and NT PCs; Mac volumes show up everywhere you can access Windows disks, including the right-click pop-up menu of Windows Explorer and My Computer, and inside applications.

With MacDrive 98 installed, PCs can read and write to Mac-formatted 1.4MB floppies (except older 400K or 800K disks), as well as to Mac media attached to a SCSI card or parallel port. This includes Iomega Jaz and Zip disks, hard drives, and optical devices. On hybrid CD-R and CD-ROM media with both Mac and PC partitions, you can choose to see just the PC files, just the Mac files, or both. Version 3 adds support for both reading from and writing to HFS+ (Mac OS Extended) disks. And while MacDrive 98 also lets you format disks as single HFS or HFS+ partitions, it does not install a driver, so Mac users need a utility—such as FWB's Hard Disk Toolkit—to mount such volumes (this isn't necessary with floppies, fortunately).

MacDrive adds some useful features to help PCs deal with the files on Mac disks. By reading file types and creator codes, it knows which Windows programs to use to open Mac documents, and even assigns the correct Windows icons and three-character file name extensions. Conversely, when saving a Windows document to a Mac volume, MacDrive inserts the correct type and creator codes. You can edit this feature, called

Extension Mapping, with the MacDrive 98 Properties control panel. Unlike DataViz's Conversions Plus, MacDrive 98 doesn't translate between proprietary data formats—for example, changing an AppleWorks spreadsheet file into a Lotus 1-2-3 document—so it's only useful when you're moving files between cross-platform applications available for both Mac and Windows, such as Microsoft Office.

MacDrive 98 can also decode and encode files in MacBinary, and it can decode BinHex—a handy feature if you want to create a file on your Windows computer and send it to a Mac user. The Mac uses these two encoding formats in email and on the Internet. The Extension Mapping feature creates a Mac icon, then MacBinary and BinHex ensure that the Mac type and creator codes survive the transmission.

MacDrive 98 is a great way to help Macs fit into a cross-platform environment. With seamless Windows integration and the ability to work with both SCSI and parallel drives, MacDrive 98 makes using Mac disk media on a PC a no-brainer. If it installed the necessary drivers on Mac disks and offered file translation, it would be perfect.—*John Rizzo*

GOOD NEWS: Enables Windows PCs to read, write, and format almost any Mac media. Works through standard Windows interfaces. Assigns file icons. Can decode MacBinary and BinHex files.

BAD NEWS: Doesn't add a Mac driver to disk when formatting Mac volumes. Single-partition formatting only. No translation of Mac file formats.

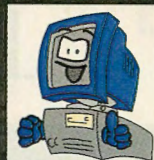


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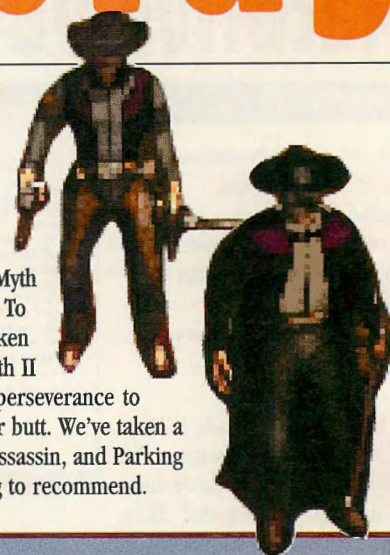




power play

We play hard around here so you don't have to.

Myth Remake



Although Myth II was released a year ago, the Myth engine still has some great legs under it. To prove the point, some Myth fanatics have taken the world creation tools that Bungie provided with Myth II and combined them with hard work, creativity, and perseverance to create total conversions for Myth that kick some major butt. We've taken a look at several: The Wild West, World War II: Titans, Assassin, and Parking Wars. They all play differently, and each has something to recommend.

The Wild West

Gary Simmons and his crew have done an outstanding—and humorous—job of bringing the Old West to life in this great conversion, which includes tons of new maps and units, ambient life, and great new weapons (the outlaw's shotgun is especially cool). And, if you're looking for a little practice before going head-to-head with friends on the Net (which is probably a good idea, given the number of new units and weapons), The Wild West features a single-player level, too. Ride 'em cowboy—you won't be disappointed!

World War II: Titans

Not that wars are great (see *Saving Private Ryan* for more on that point) but it's hard to resist a conversion like this. Taking a slightly different tack, World War II: Titans features more generic characters (like soldiers) who use a wide variety of weapons—rifles, grenades, mortars, flame throwers, medical packs, mines, and the like—while including fantastic landscapes and mechanized weapons such as cannons and tanks. This is a must-have conversion for everyone who owns Myth and likes the idea of a great World War II tactical simulation. Given the wide range of weapons available for use by the generic soldier, World War II: Titan gets complicated very quickly. Santa's Head has done a superb job of creating a conversion with depth.

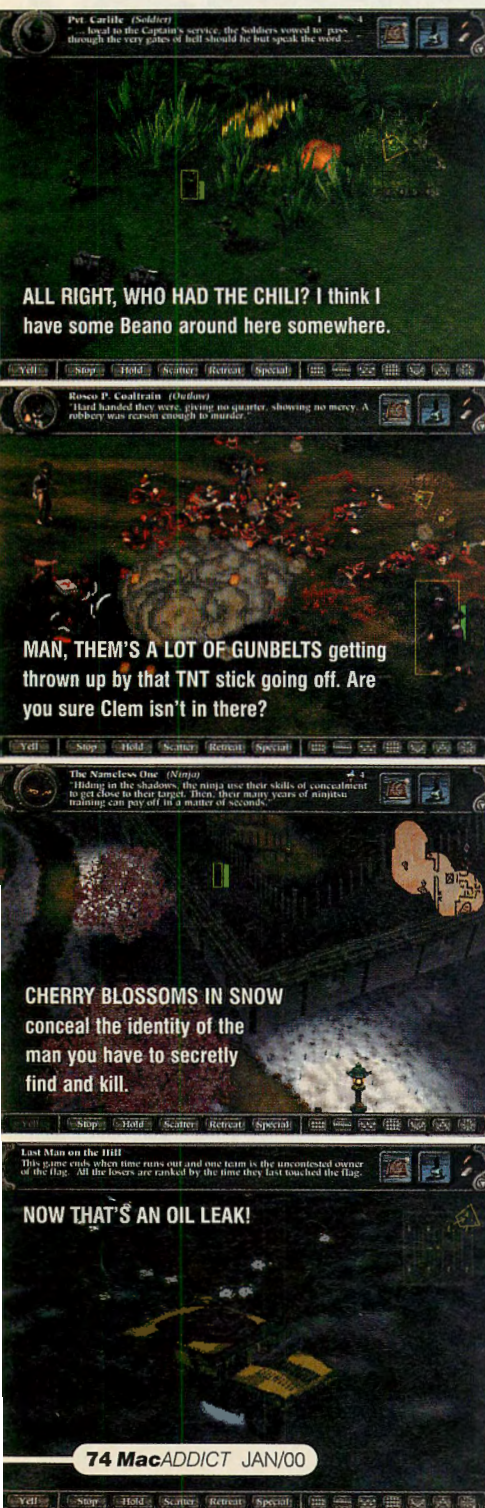
Assassin

Part of the unfinished (and lamented) Daimyo project (a historically accurate conversion meant to simulate feudal Japan), Assassin is a bit different than the other plug-ins, in that it is strictly a single-player set of maps. You play a solo assassin pitted against an army of warriors. Your mission: sneak inside a heavily guarded compound and assassinate the enemy leader. Your talents include the ability to hide in shadows and throw shurikens. You only have four deadly weapons, so use them wisely—you'll probably want to save a couple for your target. Beware, though—Assassin is very difficult, and if you try to go head-to-head, you'll have a very short game.

Parking Wars

Parking Wars is the plug-in with probably the least range, but that doesn't keep it from being fun for a quick game. Parking Wars is set in a run-down parking lot at night where hatchbacks, urban tanks, helicopters, and mechanics wage a sort of destruction derby. Although it's fun for the first few rounds, it just doesn't have the depth of the other conversions. On the other hand, the appeal of smashing a bunch of cars in a parking lot is pretty strong.

If you want to try your hand at even more conversions (there are a lot of them!), head on over to <http://mill.bungie.org> to look at the latest. There, you'll find a thriving community of Myth world builders and their latest efforts as well as films and plug-ins. The conversions that they've created bring a whole new dimension to a classic game.—DR



SimCity 3000 Cheats

Oh, sure, *you're* not the cheatin' kind. Right. Tell us another one. We know that it's fun to cheat at games, so we compiled a list of cheats for the latest release of the classic game series, SimCity 3000 (see *Reviews*, this issue, p58). Although Maxis recommends

that you try the game first *without* cheating, we have your fix when you decide that the straight and narrow just isn't cutting it anymore. To enter a cheat, type Command-Option-Shift-C and a small pop-up dialog box will appear. Type in the cheat from our list of favorites below and hit return to force it into effect.—DR

Cheat Code

What it does

nerdz rool Industrial zones will fill with clean, hi-tech industries.

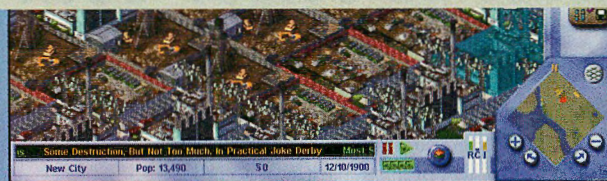
ufo swarm Type the code and then choose UFO under Disasters to watch your city get mobbed by flying saucers.

i am weak Adding zones; making buildings, utilities, or transportation; planting trees; and adding surface water now costs nothing.

garbage in, garbage out Builds any garbage building.

power to the masses Builds any power building.

water in the desert Builds any water building.



power play

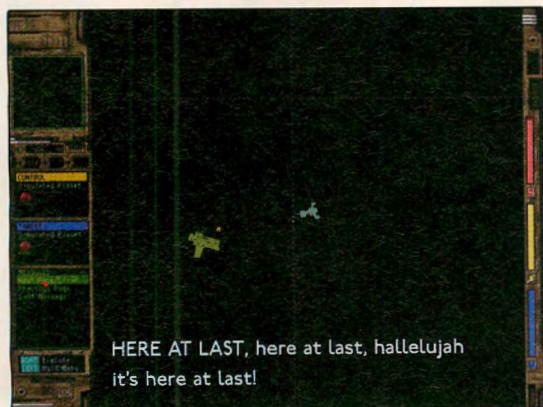
ARES

BETTER LATE THAN NEVER, ARES HOLDS UP OVER TIME

Requirements: 25MHz 68040 or faster, Mac OS 7.5.3. or later

Price: \$25

Contact: Ambrosia Software (<http://www.ambrosiasw.com>)



Those of you who've been with us since the beginning (way back in 1996) might remember that we previewed the game Ares in our premiere issue. Well, due to some distribution issues that we won't get into here, Ares had to wait to see the light of day—until now. Ambrosia Software is now distributing the shareware game, and you can get it off The Disc. How does Ares hold up after three years of sitting on the shelf? Surprisingly well.

You can play the science fiction space game Ares as an arcade game, a strategy game, or both—depending on how you feel at the time. Ares lets you move from piloting a ship in a dogfight to managing the entire war effort simply by zooming in or out. You can see stars in 20 single-player missions ranging from escort missions to planetary invasions or, if you get the urge to squash some young punk who wants to take over the galaxy, you can take advantage of Ares' network play capabilities. Ares also has a few tutorial levels to get you started—a good thing, since this game has a steep learning curve.—DR

Screenshot of the Month

We asked for your best gaming screenshots, and you responded to the call in full force. Not ones to back out on a deal, here are two of the great gaming moments from your recent past.



Artist's statement:

Carmageddon may be an old game now, but I always felt the pixelated pathos of the crawling figure juxtaposed with the unfeeling machine to be, well, really cool. Sick, but cool. Also, the Hornet is more of a composition thing. Once ground defenses are eliminated, the ability to swoop in unmolested and really mess up someone's day (and drive up their renovation bills) is a good thing.—Paul Smith



how to

how to

email filters

Get your junk mail to the Trash before it hits your eyeballs.

How to Filter Your Email

by Ian Sammis



Some people are well organized. As soon as they get their email, they promptly file it away according to a more or less fanatical filing system. They never lose an important message.

Then there's the rest of us. Sure, we read our email when it comes, but then we just leave it to pile up in our in-boxes. After a few months, just scrolling through them is a long, tedious process. We can defer the problem for a while by dumping old messages into a mailbox with some uninspired name ("Archived Mail" comes to mind), but this is akin to cleaning a room by shoving everything into a closet: It looks better, but it doesn't get rid of the underlying mess.

Fortunately for the less-than-well-organized among us, most email programs have a phenomenally useful feature called *filtering*. Like that helpful coworker who simply can't stand the vast pile of papers teetering precariously on your desk and eventually sorts it for you, filters can organize your email fairly painlessly.

To get you started, we'll demonstrate how to make simple filters. Since every email program is a bit different, we'll show you how filters work in the most recent versions of Netscape Communicator, Outlook Express, and Eudora Pro.

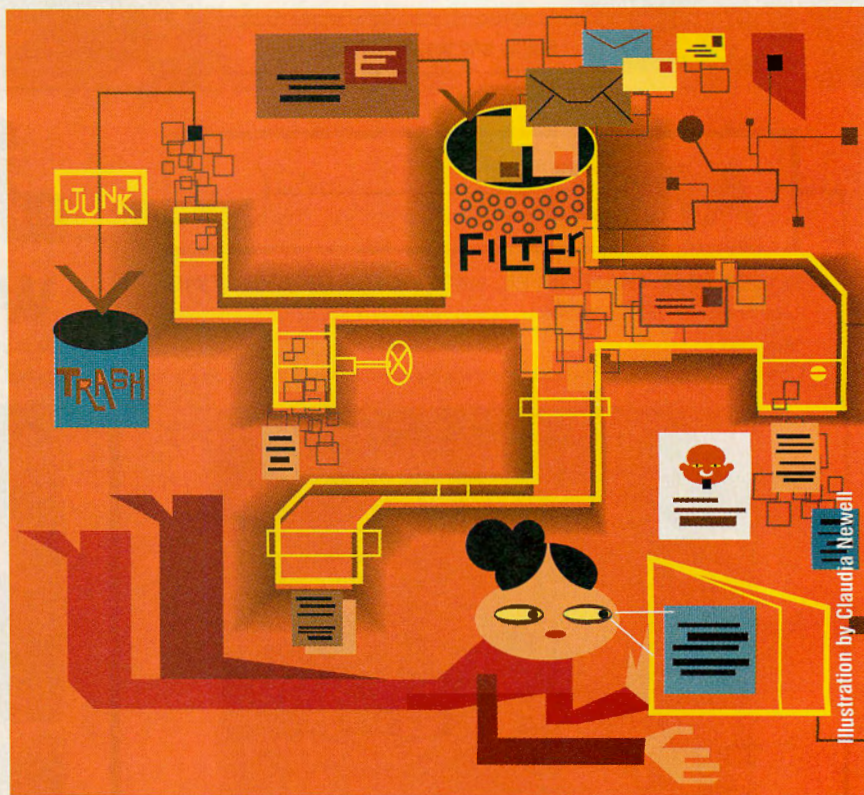


Illustration by Claudia Newell



TOUGH
This stuff's for the pros.



TRICKY
It'll take some effort, but you can do it.



EASY
The fundamentals, if you will.

What Is a Filter, Anyway?

Although the various email programs on the market implement the filter feature differently, all filters have the same fundamental form. A filter contains two parts: a set of rules and a list of commands. The filter determines whether each message it encounters fits a specified set of rules. If it does, the filter applies commands to the message.

For example, suppose you're getting constant, insufferable messages from a spammer, bearing the subject: "Something special for YOU." As tempting as it is to send something special right back by return post, that won't usually solve the problem. Instead, you can create a filter that looks for any message with the subject

"Something special for YOU" and sends it directly to the Trash. Once the filter is running, it smoothly deletes any further spam that has the specified subject line without requiring further intervention.

Filters do more than delete spam. Suppose you're constantly losing messages from your ISP amid the rest of your email. Since those messages have recently begun referring to your bill and threatening your kneecaps in the same paragraph, you *really* don't want to miss reading them. No problem! Just create a filter that looks for your ISP's name in the "From:" line of the header, and plays some distinctive sound when it finds a match. Now you'll *know* when those important messages are on their way.



**FIND A
EUDORA PRO
4.2.1 DEMO,
Outlook
Express 5,
and Com-
municator
4.7 on
The Disc.**

Filters in Netscape Communicator 4.7

1 Open the Message Filters Window

Choose Message Filters from the Edit menu. The Message Filters window appears—this is where you create filters in Netscape Communicator.

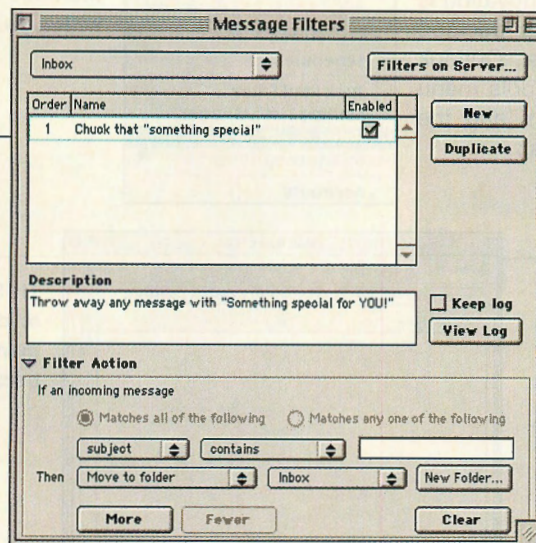
Edit	
Undo	⌘Z
Cut	⌘X
Copy	⌘C
Paste	⌘V
Clear	
Select All	⌘A
Get Info	⌘I
Find...	⌘F
Find Again	⌘G
Search Messages...	⇧⌘F
Search Internet	
Message Filters...	
Preferences...	

LIKE ALMOST EVERYTHING ELSE in Netscape Communicator, filters hide out in the Edit menu.

how to

2 Make a New Filter

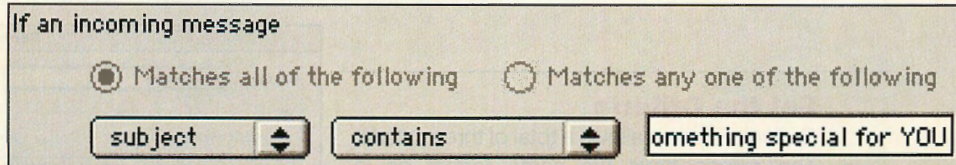
Click the New button in the upper-right corner of the window to create a new filter. Type a name for it in the list at the top. Netscape allows you to enter a brief description of the filter as well. This is worth doing—what seems obvious to you now may seem awfully strange in a few months.



ALTHOUGH IT MAY SEEM like a waste of time in the short run, you'll find that typing in a description can eventually prevent aggravation.

3 Lay Out the Rules

The Filter Action panel at the bottom of the window contains the actual meat of the filter. Netscape filters consist of a series of rules, followed by a single action. The mechanism for specifying the rules is very much like that of the pre-OS 9 Find File feature: You can set additional rules by clicking More.



IN THIS CASE, we're just looking for messages that include "Something special for YOU." The radio buttons appear grayed out because there's only one rule at the moment.

4 Set the Action

Netscape's filters are relatively primitive by the standards of dedicated email programs. Each Netscape filter can execute only a single command. Moreover, the commands allowed aren't terribly complicated: You can delete messages, move them to a different folder, mark them as read, and set their priorities. Netscape filters are sufficient for deleting spam, but they're somewhat inadequate for notification or other heavy-duty tasks.

- Move to folder
- Change priority
- Delete
- Mark read
- Ignore thread
- Watch thread

NETSCAPE'S FILTERS are very simplistic by the standards of dedicated email programs. In particular, the lack of notification tools limits the usefulness of Navigator's filters.

5 Debug Your Filter with the Log

If you check the Keep Log checkbox in the Mail Filters window, Netscape keeps track of what your filter is doing when it moves messages around. This can be useful if a filter starts to behave unexpectedly.

Applied filter "Chuck that \"something special\" to message from ian@macaddict.com (Ian Sammis) - Something special for YOU! at 10/14/99 10:39 AM
Action = Delete

WE HAVE MET THE SPAMMER, and he is us—Netscape's log shows just what filters are doing.

1 Open the Mail Rules Window

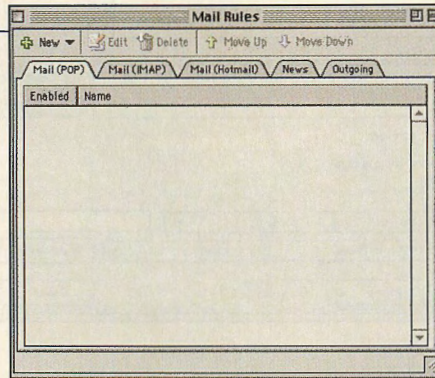
Although filters in Outlook Express are very similar to those in other programs, Microsoft (in its usual "innovation is renaming something" style) has decided to give them a different name. Outlook Express hides its filters in the Tools menu under Rules. Select this option, and the Mail Rules window should appear.



FOLLOW THE SHIFTING DEFINITIONS, folks. Microsoft calls filters "rules" and rules "criteria." Outlook Express also includes an automatic junk mail filter, which you can easily enable.

2 Make a New Rule

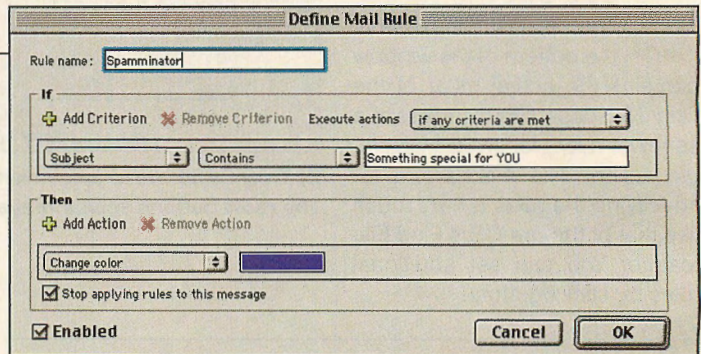
Outlook Express separates organizing rules and editing them into two separate windows. Click the New Rule button at the top of the window, and the Define Mail Rule window opens, allowing you to set up a filter.



THIS WINDOW LETS YOU ORGANIZE or delete rules after you've written them. For the moment it's blank, because we haven't set up any rules.

3 Set the Criteria

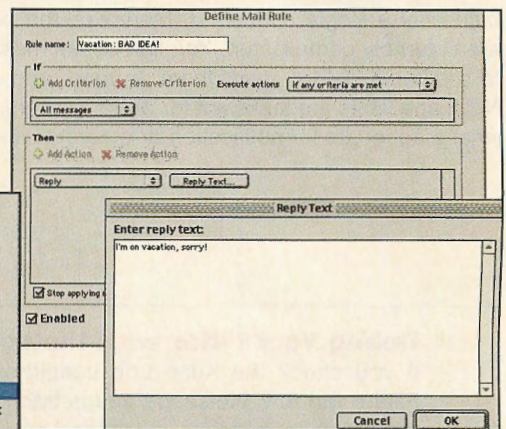
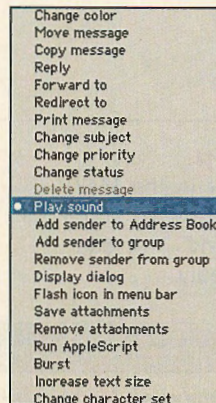
Outlook Express allows a total of three criteria. The criteria have the same format as in Netscape Communicator—once again, they're almost identical to the Find File dialog box's rules in the pre-OS 9 finder. The checkboxes to the left of the commands allow the user to turn the rules on and off.



IN OUTLOOK EXPRESS, you can set up three different criteria for your filter.

4 So Many Options

The real strength of Outlook Express's filtering system is in the very, very broad range of commands you can apply to messages. Communicator's commands are simplistic compared to Outlook Express's many advanced commands. You can color messages for greater visibility, set them to trigger sounds and alerts, and forward or redirect them. With this power comes a bit of responsibility—some filters will quickly make others detest you. Many people new to filters, for example, hit upon the one shown here as a way to let people know they're on vacation. This is a *bad* idea if you're on any mailing lists, as every message posted to the list will receive a vacation message reply from you. If the reply messages go to the list, and it isn't moderated, you are liable to create a mail storm that at best will make you very unpopular and at worst will take down the mailing list altogether.



THIS FILTER WILL QUICKLY make you public enemy number one on any mailing lists you join.

OUTLOOK'S RULES are substantially more powerful than Netscape's filters.

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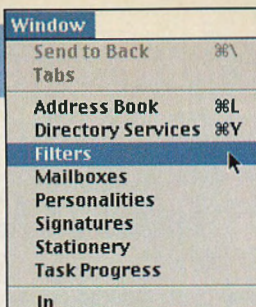
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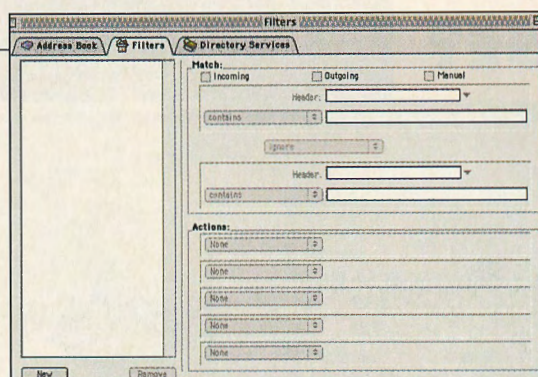
1 Open the Filters Window
Select Filters from the Window menu. Eudora's Filters window allows you to write a filter.



Filters in Eudora Pro 4.2.1

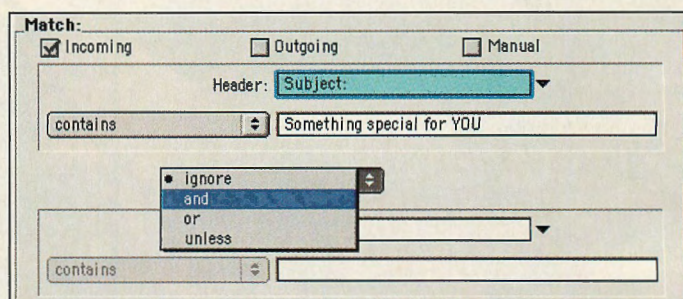
EUDORA HIDES ITS FILTERS in the Window menu.

2 Make a New Filter
To make a new filter, click the New button in the lower-left corner of the window. Eudora creates a new, untitled filter.



EUDORA USES THE SAME WINDOW for its filters, address book, and directory services.

2 Specify the Rules
Eudora allows you to specify two rules in the section labeled Match. To access the second rule, change the Ignore selection in the pop-up menu to the relationship you want between the two rules. *And* requires that both rules be met, *Or* that either rule be met, and *Unless* that the first rule be met and the second not met. The Manual option is unique to Eudora—it allows you to create filters that you trigger by selecting Filter Messages from the Special menu.



YOU CAN SPECIFY TWO RULES in Eudora and then relate them in various ways.

4 Set the Actions
Eudora, like Outlook Express, allows you to issue a vast number of commands. You can move messages about, label and forward them, and set them to trigger a variety of notification events. A single filter can trigger up to five commands.

None
Make Status
Make Priority
Make Label
Make Personality
Make Subject
Play Sound
Speak
Open
Print
Notify User
Forward To
Redirect To
Reply With
Server Options
Copy To
Transfer To
Move Attachments
Skip Rest

EUDORA LETS YOU do quite a bit with email filters—it provides a whopping 18 commands.

The Easy Way to Do It

Eudora Pro has a second method for creating filters. It lacks the power of the Filters window, but is much easier to use when you're setting up very straightforward filters. To use this method, select an email message type that you'd like to filter. Then select Make Filter from the Special menu. The Make Filter window that appears is a simplified version of the Filters window. It allows you to create a simple filter that transfers or deletes messages similar to the one you selected. If you want to create a more complicated filter, the Add Details button switches you to the Filters window, giving you access to all the power Eudora can bring to bear.



THIS ISN'T QUITE WHAT WE WANT—as written, this filter deletes any email sent to our account!

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how to

Make a QuickTime VR Object

by Ian Sammis

how to
quicktime



FIND
GRAPHIC-
CONVERTER
3.7.1 on
The Disc.



Amid the debris of Apple's "new technology of the month" mentality of the mid-nineties, QuickTime has survived and prospered. This stemmed in part from its flexible functionality—QuickTime consists of dozens of individually clever, interrelated components. Like all those devices advertised on TV in the wee hours of the morning, QuickTime has seemingly limitless capabilities—it can compress images, play back movies, translate sound formats, even display interactive panoramic views.

But wait, there's more! You can use QuickTime to display an object that viewers can figuratively grab and rotate to see all sides. These highly specialized movies, called QuickTime VR objects (QTVR objects, if you like acronyms), are extremely easy to create. It's much easier to create a QTVR object than a panorama—it requires less precision because usually you're not stitching the images together.

QuickTime VR Objects have a variety of uses, from showing off a project to visualizing scientific data. We'll show you how to create a simple object based on scans of a fossilized dinosaur embryo.

DINOSAUR EMBRYO IMAGES ARE COURTESY OF LEE SCHIEL.

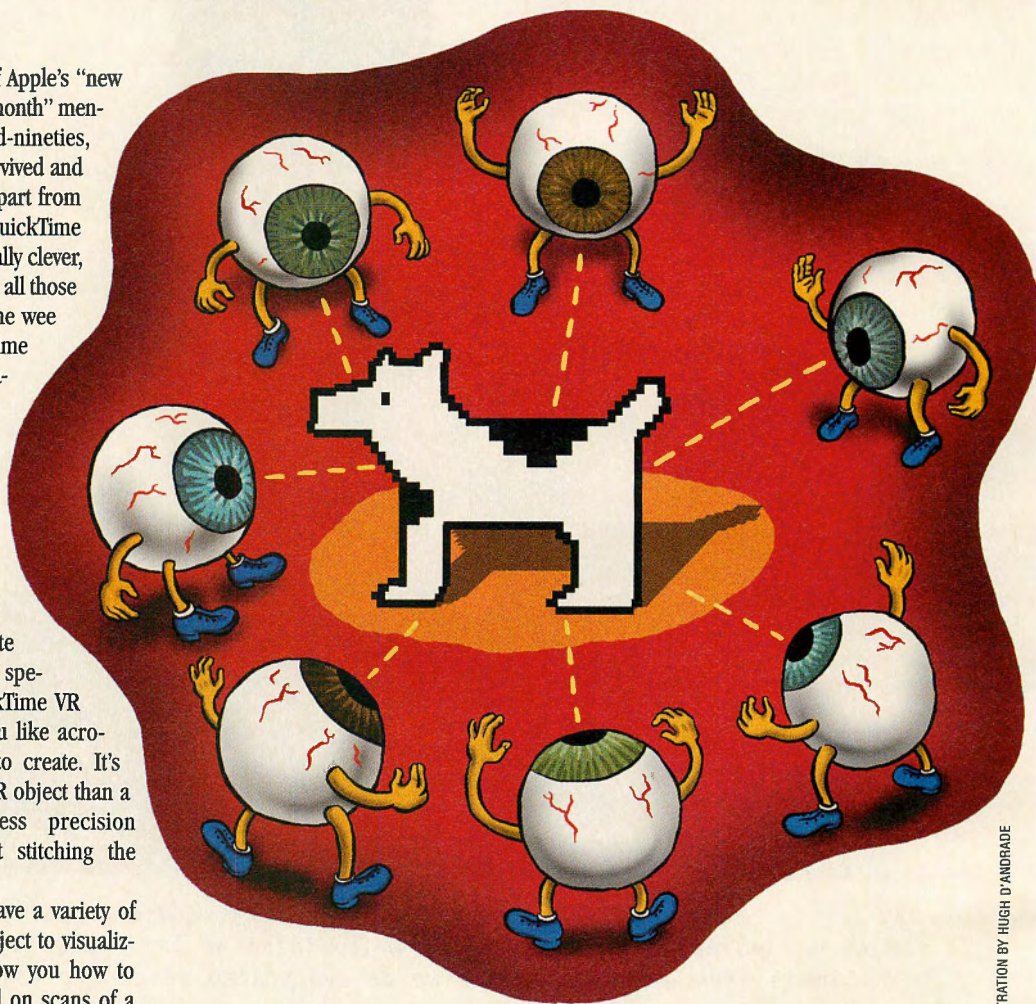


ILLUSTRATION BY HUGH D'ANDRADE

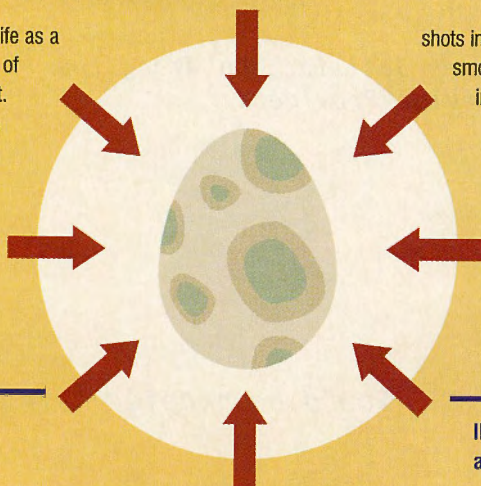
What Images Do I Need?

A QuickTime VR object starts its life as a QuickTime movie, with a series of perspectives of the same object. Every image should be the same distance from the object, directed at some fixed point on its surface.

As a starting point, you can make a movie from shots taken on a single plane. The angles between the shots must be equal and must describe a complete rotation of the object. Since QuickTime cannot stitch inwardly facing

shots into a continuous loop, the rotation will only be as smooth as the original movie. You'll want at least 12 shots in the loop for a reasonably smooth feel.

If you can feasibly take pictures on a different plane, the user can rotate the final object to see it from above or below. For this to work, you must take an additional loop of the object from the new height. You should try to stay the same distance from the object for each picture, as you want to give the viewer the impression of grabbing and rotating the object in place.



IF A PICTURE IS WORTH a thousand words,
a QTVR object is worth a thousand pictures.

1 Gather Up the Images

First, you'll need to gather together the images that will form the final object movie. If the object exists in the real world, you'll need to take photos of it from every position that you want to include in the final movie. If the object is virtual, you'll need to render views from each position.

As an example, we'll create a movie from scanned images of a dinosaur embryo inside its fossilized egg. We'll work on a single plane, with images separated by 10-degree increments.

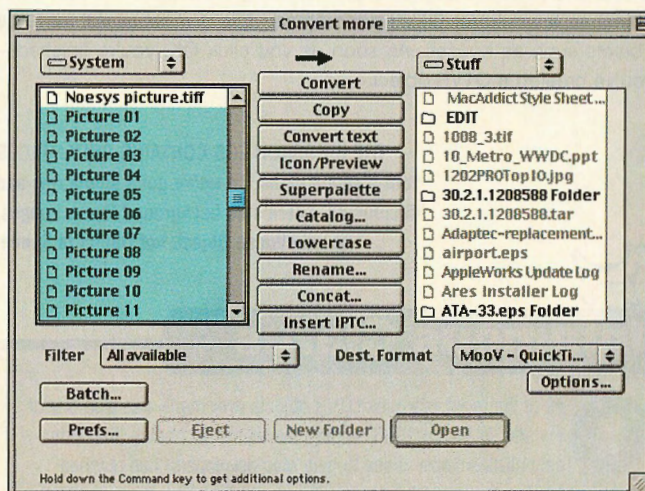


WE START WITH THESE BEAUTIFUL SNAPSHOTS of a fossilized dinosaur embryo. We have 36 such images, describing a complete rotation in 10-degree increments.

2 Make a Movie

Once you've got all the images you want to use, you must convert them into a single QuickTime movie. Many programs will do this for you; one of the most readily available is the ubiquitous shareware program GraphicConverter, by Lemke Software (\$35, <http://www.lemkesoft.com>). To convert a sequence of still frames into a QuickTime movie using GraphicConverter, select Convert More from the File menu. In the dialog box that presents itself, select the images that will go into the movie.

Your computer reads the images in what it considers alphabetical order. Computers generally aren't very good at this—Image 10 precedes Image 2, for example, while a file named Image 02 precedes Image 10 as you'd expect. Name your files carefully. Set Dest. Format to MooV - QuickTime Movie.



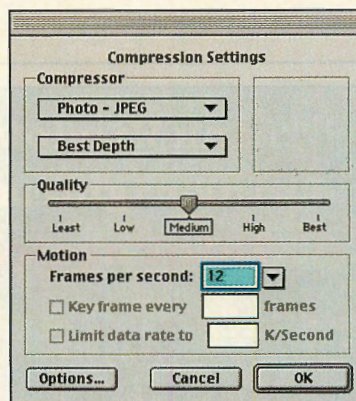
WE'VE ADDED ZEROS TO PICTURES 1 through 9 to make them line up correctly in "alphabetical order."

3 Set the Options

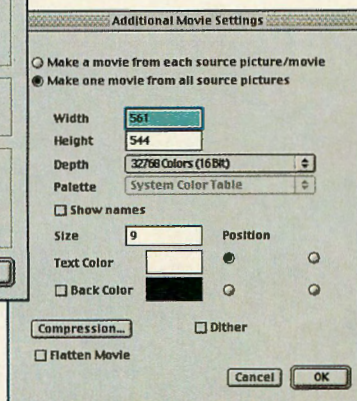
Before you click the Convert button, set some options for the final QuickTime movie. Click the Options button to access a dialog box that will allow you to control the compression of the QuickTime movie.

For a QTVR object, you don't want to use a compression scheme like Cinepak that compresses the movie temporally (that is, stores changes from the previous frame). The problem is that these sorts of compression schemes tacitly assume that viewers play the movie straight through from beginning to end. With QTVR objects, viewers constantly play films in reverse, then forward again. To avoid the ugly artifacts the back-and-forth motion can create, use a compression scheme like Photo JPEG which stores each image without reference to the others. Once you have the settings you want, click OK (dismissing the Compression Settings window), then click Convert.

A new dialog box appears, letting you set some options for the QuickTime movie. Select Make One Movie From All Source Pictures, which tells GraphicConverter to compress all of your pictures into a single movie. Set Height and Width to the movie size you desire—usually you'll want these settings to match your original images. As soon as you click OK, GraphicConverter should compress all of your images into a single movie.



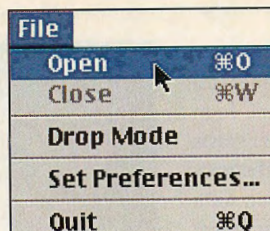
JPEG COMPRESSION doesn't make the movie as small as Cinepak or Sorenson would, but it guarantees storage of each image without reference to the preceding one.



IF YOU FORGET TO TELL GRAPHIC-CONVERTER to make a single movie from each source frame, you'll end up with a lot of one-frame movies.

4 Open the Movie in Make QTVR Object

Next, you'll need to change the QuickTime movie into a QuickTime VR object. Apple provides a tool for creating QTVR objects on its development tools Web site, at [ftp://ftp.apple.com/devworld/Tool_Chest/QuickTime_VR/QuickTimeVR_Tools_1.0b2.sit.hqx](http://ftp.apple.com/devworld/Tool_Chest/QuickTime_VR/QuickTimeVR_Tools_1.0b2.sit.hqx). Once you've downloaded and uncompressed this file, you'll find the Make QTVR Object program in the newly expanded folder. Run this program. Select Open from the File menu, and open your movie.

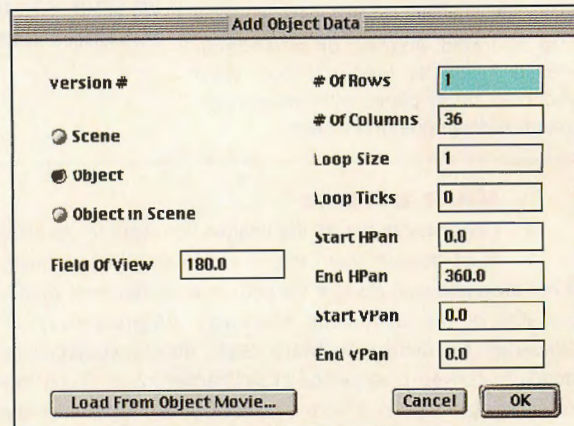


YOU'RE GETTING CLOSE—just open the new movie in Apple's Make QTVR Object tool.

5 Set the Object Data

Now we're almost done. Select Add Object Data from the Edit menu. In the dialog box that appears, set how many rows and columns of images you've taken. You also have the option to set whether you've got a solitary object or an object in a scene; in the latter case, QTVR attempts to mesh the background that lies beyond the object as it would for QTVR panoramas—this is most useful for large objects such as houses. As soon as you click OK, you're finished—you've created a QTVR object.

THE DINOSAUR EGG CONTAINS ONLY IMAGES from a single plane, so we've got a single row and 36 columns. There's no background to our images, so we choose Object, not Object In Scene.



Infamous Clarus

One of the most infamous QTVR objects ever made was also one of the first. In March 1996, Apple's Developer Technotes (the technical bulletins Apple writes to help Mac developers) had reached number 1031. The number filled Apple's Developer Technical Support (DTS) group with nostalgia: Technote 31 was the celebrated "dogcow" technote that first introduced Clarus to the world. Taking advantage of the anniversary, DTS put together Technote 1031: "The Dogcow Goes Quicktime VR." Technote 1031 is still up on the Apple's Web site (<http://developer.apple.com/technotes/tn/tn1031.html>), and provides an outstanding description of generating a rendered QTVR object.

CLARUS IS A TWO-DIMENSIONAL CREATURE—she can hide from predators by facing them head-on.



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how to

Manage Multiple Users

by David Reynolds



Although Mac OS 9 ships with lots of new features, one of the most powerful—and most confusing—is Multiple Users. First promised in the long-defunct Copland pro-

ject (back in the early '90s), Multiple Users is finally here. If you share a Mac with anyone, Multiple Users will make your life much easier (if you run a Mac lab, you've wanted this for years). We'll show you how

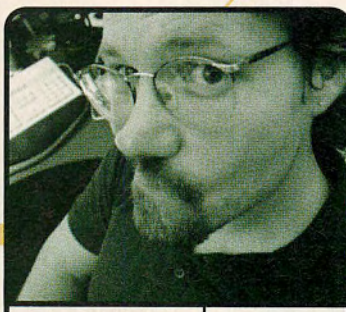
to set up the owner account, create a peer account (for, say, a spouse), and create a limited account (for a child). We'll also show you how to set up a guest account for visitors who want to use your Mac.

All About Multiple Users

As Macintosh users, we do things differently than people who use other modern operating systems—and that doesn't just mean that we're more creative, smarter, better looking, and that our feet don't stink (although all that's true). We also make the sometimes unwarranted assumption that whoever sits in front of our Mac owns it and can do anything they please, even damaging the system by throwing away vital bits of the system software. Other operating systems (such as Unix-based OSs and Windows) don't. Instead, they use multiple user accounts to make things nice and secure.

Now, with Mac OS 9, we too can set up multiple user accounts to keep things neat. When someone logs on to a machine with Multiple Users, they can be limited to browsing their own files, unable to mess with anyone else's stuff. But Multiple Users isn't just about security. When people log onto a Mac running Mac OS 9, they retrieve their own documents, desktop pattern, bookmarks, Internet preferences, and many other settings that folks fight about when there's only one Mac to go around.

There are several kinds of user accounts within three broad categories: an owner account, regular user accounts, and a guest account. The owner is considered God when it comes to managing the Mac. (For those with a Unix background, the owner is roughly equivalent to the root account.) This person (the same person whose information is in the File Sharing Control Panel) can do almost anything on the Mac, including creating and deleting user accounts. You can set up accounts with varying degrees of power—here's a look at four common user accounts:



OWNER

What is it: The all-powerful account based on information in the File Sharing control panel.

Who's it for: The person who paid for the Mac.

What can it do: The owner is like the Lizard Queen—she can do anything.

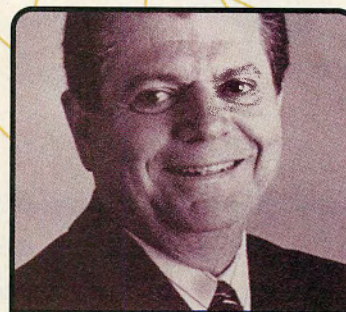


PEER

What is it: An account created by the owner with few (or no) restrictions.

Who's it for: Spouses or others who should have equal power on the Mac.

What can it do: A peer account is functionally equivalent to the owner—it can even manage other accounts.

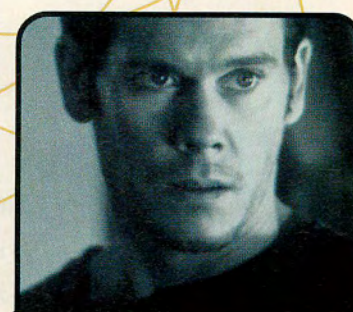


LIMITED

What is it: A limited account has restricted access to the network, applications, printers, etc.

Who's it for: Small children, or your destructive uncle Gil.

What can it do: The owner can tightly restrict a limited account and specify exactly what a limited user can do.



GUEST

What is it: The guest account lets anyone access your Mac.

Who's it for: Anyone who wants to use your Mac irregularly.

What can it do: The Guest account is a lot like the limited account, in that the owner can restrict its access in a lot of ways.



TOUGH
This stuff's for the pros.



TRICKY
It'll take some effort, but you can do it.

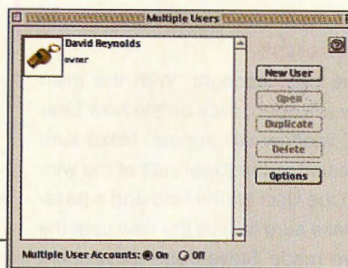


EASY
The fundamentals, if you will.

Setting Up the Owner Account

1 Turn It On

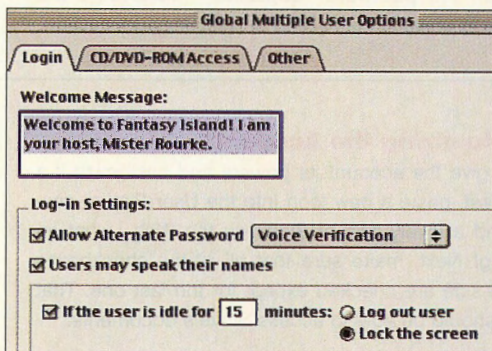
Setting up the Owner account is pretty easy, since you already entered much of the required information when you first set up your Mac. Open the Multiple Users Control panel, and activate Multiple Users by pressing the On radio button at the bottom. If you walked through the Mac OS Setup Assistant when you installed Mac OS 9, your owner account is already set up.



TURN ON MULTIPLE USERS before you get started, or not much else will happen.

2 Think Globally

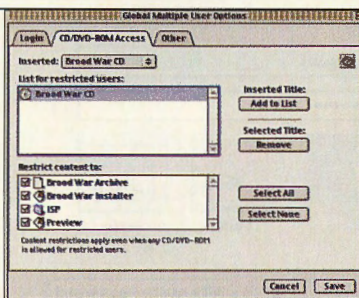
Click the Options button at the right to access the Global Multiple User Options tabbed window. The settings that you create here will affect all the user accounts, so be careful what you change. First, we'll deal with the login settings. Type a welcome message in the Welcome Message box—this text will appear in the login window. If you have sound input, enable the Allow Alternate Password checkbox to let folks use the Voice Verification feature, and make sure that the Users May Speak Their Names checkbox is marked. Finally, for an added touch of security, check the idle user box at the bottom and lock the screen after 15 minutes. That way, if some user is lost in reverie, the screen will lock, and they'll have to enter their password to open it.



HERE'S WHERE YOU make your first impression by controlling login settings.

3 Redeeming Media

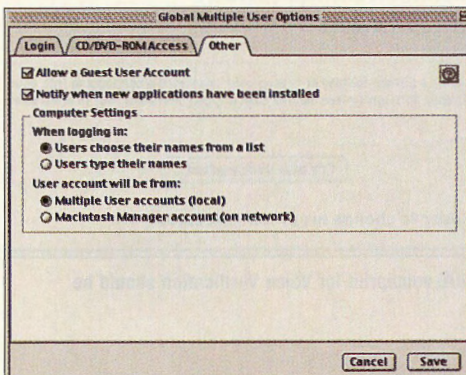
Sometimes, you may not want everyone to have access to every CD or DVD that's dropped in a drive. You can restrict CD and DVD access. Click on the CD/DVD-ROM Access tab, and put a CD in the CD-ROM drive. Click Add To List to add the CD to the list of approved titles for restricted users. You can also check and uncheck individual applications, folders, and documents on the CD or DVD. Leave them all checked unless you have good reason to uncheck one.



EVERYONE SHOULD be able to play Starcraft: Brood War.

4 Finishing Touches

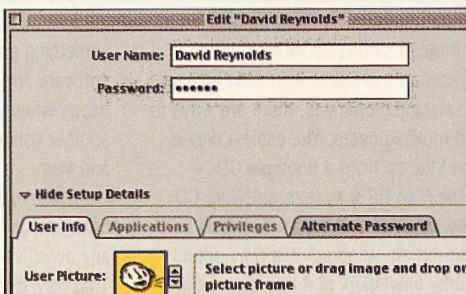
Click on the Other tab, which will present you with a list of options that just wouldn't shoehorn into the other two categories. Check the boxes next to Allow A Guest User Account and Notify When New Applications Have Been Installed. The first box automatically creates a Guest account (which we'll cover later), and the second lets you know whenever other users install applications. Finally, make sure the bottom two options are set to allow users to select their names from a list (unless you want an even more secure setup) and store Multiple User accounts on the local hard drive. Mac Lab folks sometimes have the configuration file on a network machine, but that's pretty unlikely on a home machine. Click the Save button to finish setting global options.



OTHER—THE CATCHALL for stuff that wouldn't fit elsewhere. Still, there are some important settings here.

5 The Final Icon

Now that you're back at the main screen, you'll notice that a new account has been added: the Guest account. But before we get to that, we need to attend to some housekeeping. Select the owner account and click the Open button on the right. The Edit window will open. Click on the triangle to the left of Show Setup Details. Here, you can select a new icon for yourself, and create a voiceprint password. To give yourself a new icon, just copy and paste a new one, or drag one over from the Scrapbook. We'll leave creating a voiceprint password for another how-to. Click the Close box.



THAT SPIFFY MAX ICON came straight from our Web site.

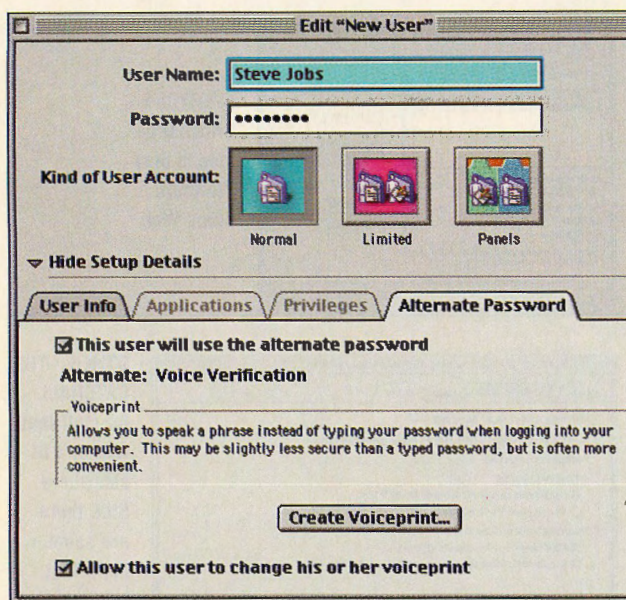
Setting Up a Peer Account

1 A Companion Account

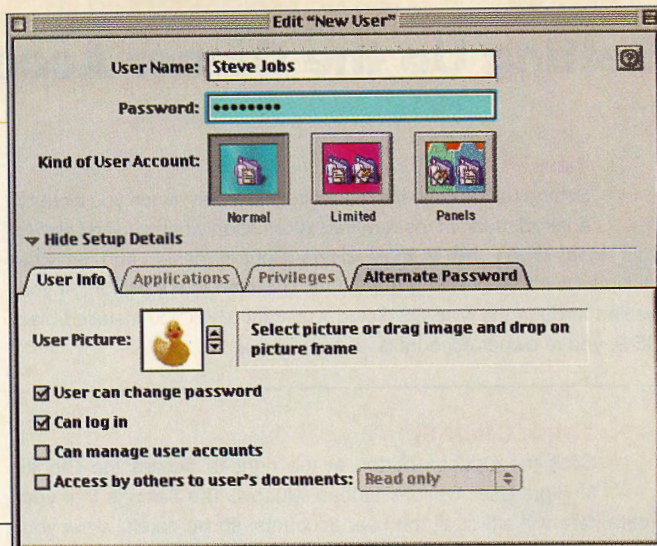
It's time to set up the peer account. With the main Multiple Users window still open, click on the New User button. The Edit "New User" window will appear. Make sure that the setup details are revealed in the lower half of the window. Enter the user's name in the User Name field and a password in the Password field. Make sure to give the new user the password. In this case, we've made Steve Jobs an account and given him the password "BugsLife." Make sure the Normal button is pressed in the Kind of User Account section.

2 Customizing the Account

Let's give the account its powers and customize it a bit. First, paste a new icon into the User Picture section. We found a lovely one of Steve on the Web—what an amazing thing! Next, make sure that all of the checkboxes along the left side are checked except for the last one. That way, no one should be able to access Steve's documents.



CREATING A UNIQUE voiceprint for Voice Verification should be easy for Steve.



HE WILL BE so happy to know that he can log on to my machine—unrestricted.



WITH THIS KIND OF POWER, Steve will be able to wreak havoc on others' accounts. It's a good thing he's trustworthy.

3 The Final Touches

We don't have to set either Applications or Privileges because the peer account is a Normal account, so those two tabs are dimmed. Instead, select the Alternate Password tab and make sure that both checkboxes there are checked. These let the peer user use Voice Verification to log in; it also allows the peer to change his or her voiceprint. Click Close to finish editing the peer account. You'll be told that a voiceprint needs to be created. Just click the Skip It button, unless the person for whom you're creating the peer account is standing right there and can create one on the spot.

Bypassing Multiple Users

Although setting up multiple user accounts protects your Mac against unwanted changes, there are ways to get around multiple users. The easiest way is to start the Mac up from a bootable CD—including the Mac OS 9 system software CD. In this case, the Mac will act as if Multiple Users is turned off. Although this may sound like a security flaw, think of it this way: what if

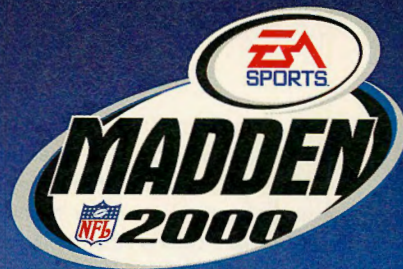
something goes wrong with the Multiple Users software and you can't log in? You'll be mighty happy when you're able to start up from another volume and access your applications and files.

If you're really concerned about security, back up your Mac's files regularly and encrypt any sensitive documents on your hard drive. That way, prying eyes can't get into things you

don't want them to see, and if someone does choose to mess up your Mac, you can restore things from a recent backup.

By the way, starting up with Extensions off won't bypass Multiple Users, since it's not implemented as an extension. Rather, it's a program that launches before the Finder, and then hands off regular operations to the Finder when someone logs on.

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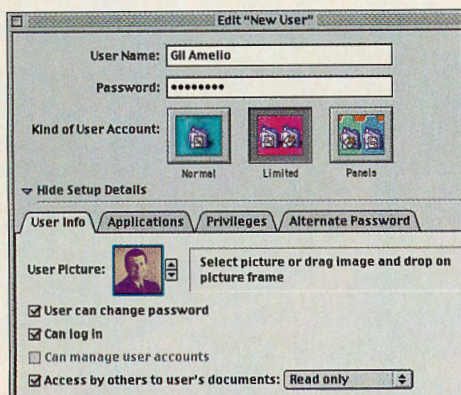


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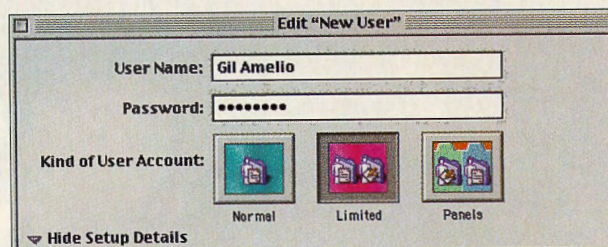
Setting Up a Limited Account

1 Another User to Feed

Again, click the New User button in the main Multiple Users window to bring up another Edit "New User" window. Enter the user's name in the User Name field and the password in the Password field. Click on the Limited button to limit Gil's access to various applications and restrict his privileges—he's not running Apple these days.



REMEMBER GIL?
He's back and he wants to use your Mac.



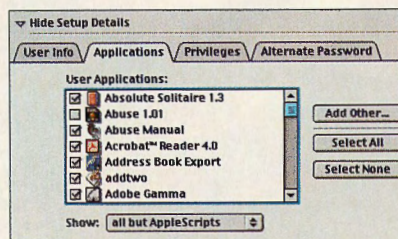
ALTHOUGH HE MAY soon be old enough to manage his own account, we think Gil may need a helping hand.

2 A Bit of a Makeover

Let's make this account a little more customized and give the restricted user a little power. The Setup Details part of the window should be open. First, paste a custom icon onto the User Picture well. Make sure that the three active checkboxes on the bottom left are checked, and the access pop-up menu is set to Read Only. This will let the restricted user log in, change their password, and let others read (but not modify) that user's documents.

3 Keeping Watch

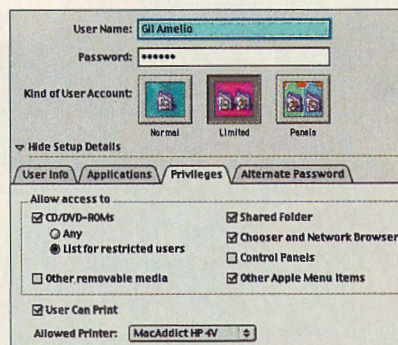
Click on the Applications tab to bring up the non-restricted Applications window. Your Mac will pause for a few minutes and then reveal a list of all of the applications on your hard drive. Select the ones that you want the restricted user to be able to launch by checking the check boxes next to their names. This can be a long list, so take your time. To simplify things, it might be worth selecting all but AppleScripts from the Show pop-up menu at the bottom.



GIL AND CLICHES go well together, but we don't want him playing violent games like Abuse.

4 It's Not a Right

Click on the Privileges tab to open up the access panel. Here, you'll select what your limited user has access to. Check the boxes next to CD/DVD-ROMs, Shared Folder, Chooser and Network Browser, and Other Apple Menu Items. Also, make sure that the User Can Print box is checked, unless you fear that the limited user will go through a ream or two of paper in an afternoon. You can restrict what printer your limited user can access by choosing it from the Allowed Printer pop-up menu. If you want to make sure the limited user only has access to the list of CDs that you created earlier, choose the List For Restricted Users under the CD/DVD-ROMs item.

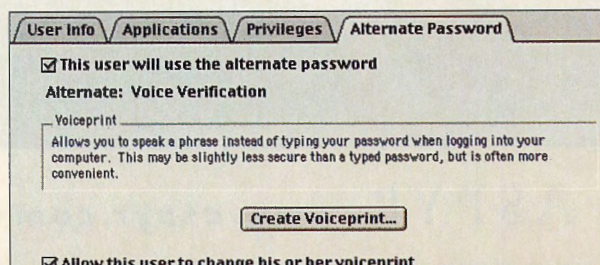


WE CAN TRUST GIL with the StarCraft CD that we added to the list earlier, but by not allowing him into the control panels, we can keep him from changing system settings.

5 Give Him a Voice

Finally, click on the Alternate Password tab. Here, you should check both checkboxes if you want to enable your limited user to use and change the Voice Verification password. Click Close, and a message that your limited user needs to create a voiceprint will appear. Just click Skip It.

YOU'LL WANT TO SKIP making Gil's voiceprint unless he's reading this over your shoulder.



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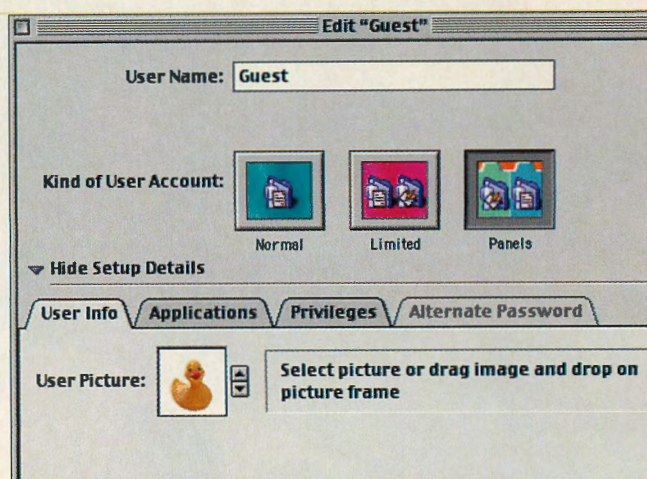
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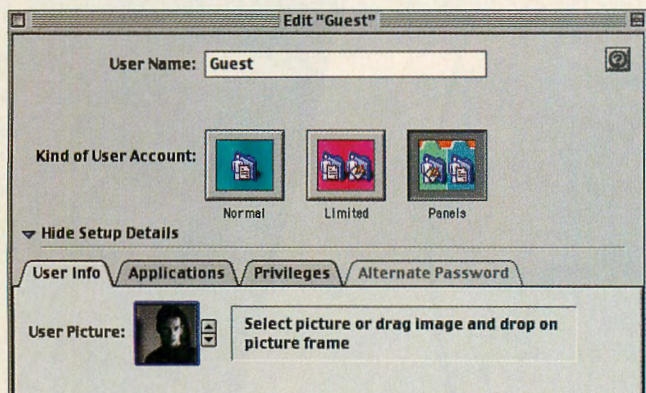
Setting Up a Guest Account

1 Just Dropping In

You never know who's going to drop in and ask to use your Mac for awhile. Fortunately, Multiple Users takes that into account (bad pun) with the Guest account, a special kind of account created earlier. The Guest account doesn't belong to anyone in particular, but the owner (and appropriately privileged users) can make changes to it. With the main Multiple Users window open, click on the Guest account and select Open. You're presented with the Edit "Guest" window. You'll notice some differences here. The Guest window doesn't have any of the powers given to other Normal users, and it doesn't have a Password field. Leave the word Guest in the User Name field, and click on the Panels button. We're going to give our Guest account a limited scope. By the way, you'll notice that the Alternate Password tab is grayed out. Since the Guest account is meant for unknown or one-time users, it's hardly worth the trouble of setting up Voice Verification for them.



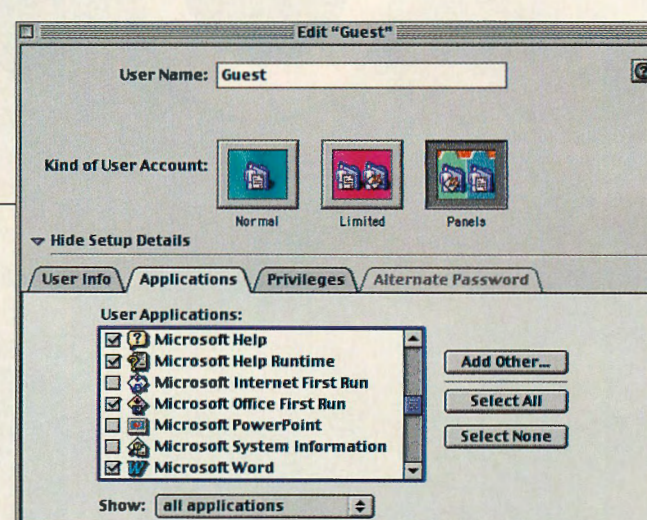
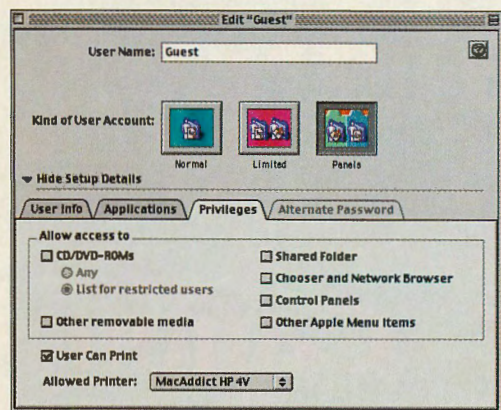
GUEST ACCOUNTS DON'T generally have a lot of power, and this one will be pretty limited.



PERHAPS KEVIN MIGHT stop by to use our Mac, but we doubt it.

3 Setting the Scope

Guests generally need to do a few specific things, so we only have to enable a few applications for them to get their work done. Click the Applications tab and select the minimum set of apps that you want your guests to have access to. Give some thought to the applications needed to run the main application that you've selected—after all, it's not so simple these days to just select a single application and be done with it.



THE ONLY THING that we wanted to enable here is Microsoft Word, but we have to enable a few other applications that the user might need in order to use Word.

BY DESELECTING THIS entire panel of checkboxes, your Guest is restricted in what he or she can access.

4 Decrease Power

Finally, we're going to assign some privileges to our guest account. Click on the Privileges tab, then deselect every checkbox except the User Can Print checkbox. This will keep your guest from getting into CDs and DVDs, other removable disks, networked volumes, Control Panels, or Apple Menu Items folders. Finally, under the Allowed Printer: pop-up menu, select a single printer. After all, you want your guest to be able to print and leave, don't you?

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how to

Make a Shockwave Game

by Rick Sanchez



Macromedia's Director is an outstanding authoring tool for developing rich multimedia applications like kiosks, DVD interfaces, CD-ROMS, and, of course, Shockwave movies. Director movies saved in Shockwave format are viewable in any browser with the Shockwave plug-in. One of the most popular uses for Shockwave is online gaming, with games like whack-a-mole and shooting galleries.

Shockwave games are a great way to add stickiness to a Web site and attract readers who might not otherwise visit. This how-to will take you step by step through the process of creating a simple shooting gallery using Lingo, Director's built-in authoring language.

We'll show you how to create a simple target-gallery type of game, in which the player tries to shoot planes that zoom across the screen. The code was originally written as part of a game designed to advertise the Sega Dreamcast title *Incoming*, so we've taken our graphics from that game; when you design your own game you can include graphics of whatever you'd prefer to be shooting at.

Even a simple game like this one requires a fair amount of coding—some of the steps in the tutorial aren't the sorts of things you'd want to encounter in dark alleys on moonless nights. Still, if you work slowly and carefully, you'll be shooting down your own bogeys in no time.*

* "No time" is a highly technical term. In this context, it translates to about three hours.

A Bit of Director History

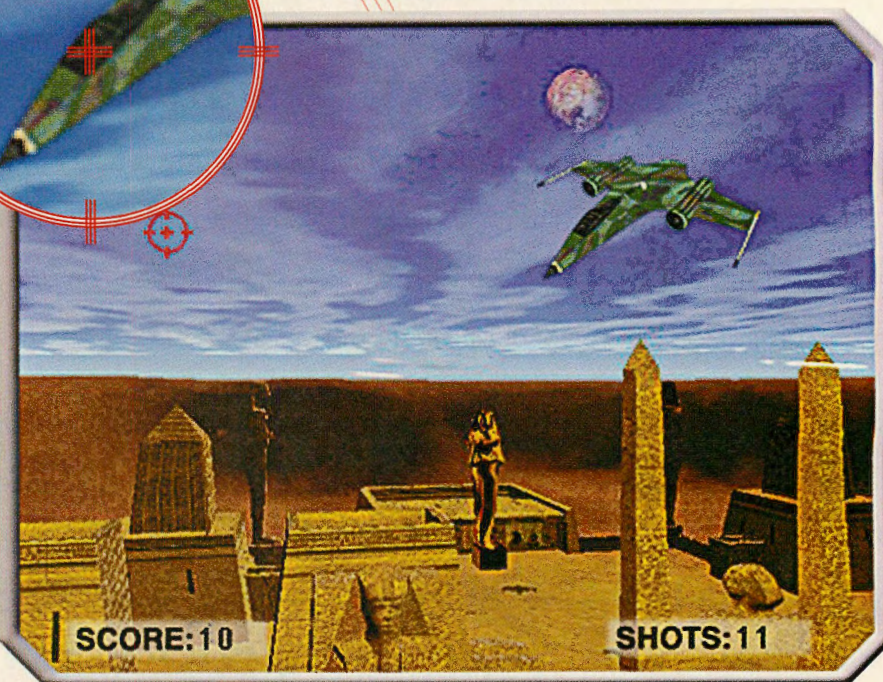
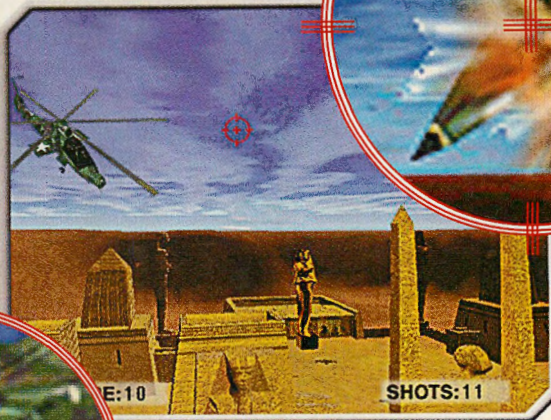
Macromedia Director is a huge, powerful piece of software, capable of creating everything from simple animations to complex Web-deliverable games. To understand the logic behind Director, it's worth tracing its origins.

Director started its life as a program called VideoWorks back in 1985. The original VideoWorks was simply an animation package, and had none of the scripting capabilities of today's Director. In 1987, the addition of the Lingo scripting language allowed Director movies to move beyond their origin as simple animations and become fully interactive programs.

Left without any interference from Lingo scripts, Director movies behave exactly like their VideoWorks predecessors—they start at the first frame, play to the last frame, and stop. You can insert scripts at various points throughout the movie to make more interesting things happen. Before the movie starts, Director runs the startMovie script, typically used to set things up for an interactive program. Before displaying each frame, Director runs that frame's enterFrame script; then it plays the exitFrame script before leaving the frame and proceeding to the next one. You'll be turning two frames of a movie into a playable game by inserting some code into enterFrame and exitFrame scripts.



WITH DIRECTOR, it's relatively easy to make a game and publish it on the Web.



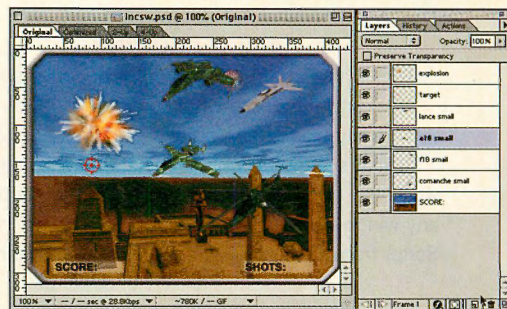
FIND A SHOCKWAVE HOW-TO and a Director 7 trial on The Disc.

1 Create the Cast

The first step in creating any Shockwave game is to create the art for it. Our graphics are from Sega Dreamcast's *Incoming* game, but only your imagination and artistic skill limit the graphics you use. Don't go completely nuts—the more art you use, the more disk space your final Shockwave game will need. For this game, you'll need four ships to shoot down, an explosion, cross hairs, and a backdrop. You'll use Lingo, Director's programming language, to create variations of the four ships so it seems as though you have more. Put the four ships into cast members 11, 12, 13, and 14, and make sure they all face to the left.

You'll also need two text fields, one to display the score, the other to display the number of remaining shots. When you create these cast members, name them "score" and "shots," respectively, by typing their names into the field at the top of the Cast window.

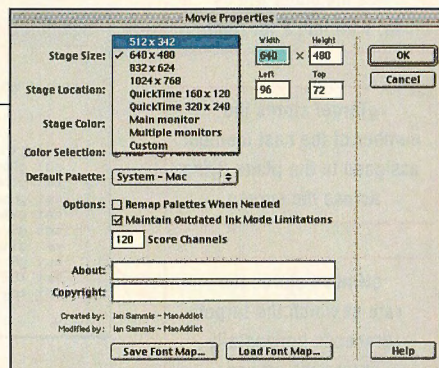
Finally, you'll need two sounds: a whoosh to play as targets fly by, and a shot sound to play when the player fires. Record these sounds using SimpleSound, then drag them onto the Cast window. Make sure you've named them "whoosh" and "shot."



TO NAME CAST MEMBERS, type their names into the field at the top of the Cast window. This will make them easier to refer to in scripts.

2 Size the Movie

Your game will play on a Web page, so you don't want the movie to take up the full 640 by 480 that Director assumes for new projects. Select Properties from the Movie submenu of the Modify menu, and set the Stage Size to 512 by 342.

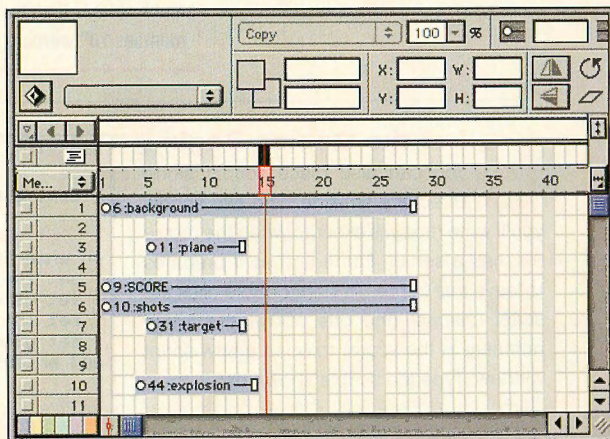


MAKE THE MOVIE A BIT SMALLER than the 640 by 480, as it is going on the Web.

3 Set the Score

Director keeps most of your directions about art placement and timing in the score. Unless you give it orders in Lingo to do otherwise, the score works like a timeline, starting at frame 1 and moving forward. The channels in the score work much like layers in a Photoshop file. The lower the number, the further behind a channel lies, so a graphic in channel 2 obscures one in channel 1.

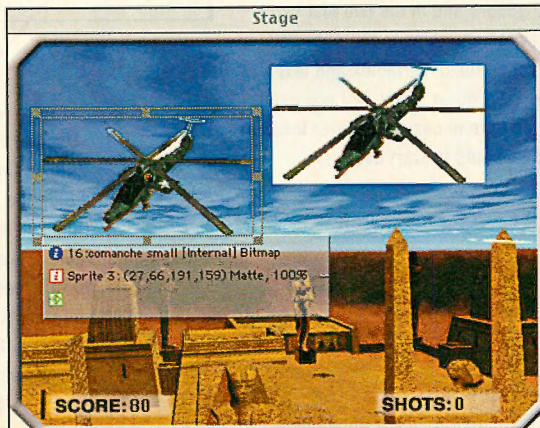
For this project, the background is in channel 1, the object you want to shoot is in channel 3, and the explosion is in channel 10. You should also place two text fields in the score to keep track of how many shots the player has left and what the player's score is. It is always a good idea to leave room between your occupied channels in case you need to add sprites (movable graphic images) later.



LAYER YOUR ART in the score window. Art in higher numbered channels will appear in front of images in lower numbered channels.

4 Choose the Inks

Unless you've imported graphics at 32 bits with an alpha channel, you'll need to set an *ink* (Director's term for a transfer mode) for the graphics to get rid of their white box. The Matte ink is usually best, but sometimes Background Transparent is better, especially in cases where you want to see through some white areas in the interior of a graphic. To add an ink, select the appropriate item in the score window, then select the ink you want to use from the pop-up menu near the top of the score window.



UNLESS YOU'VE IMPORTED A 32-BIT IMAGE with an alpha mask, your art will have a box around it. To remove the box, you'll have to use a different type of ink.

5 Set Up the Globals

Things happen in Director because scripts tell the sprites and the score what to do. Before you sit down and start writing any Lingo, plan out what scripts you need.

The first script to write is the startMovie script, which only runs when the movie first starts. To enter the startMovie script, bring any window other than the Score window to the front, then select Script from the Window menu. Once the window is at the front,

enter the script as shown.

Normally, variables only exist between the "on" and "end" of a script, and can't be shared between scripts. Globals exist everywhere in your movie and can share information between one script and another. A global line *must* appear at the start of every script you write—although you won't see it in some of the scripts that follow, this is only because the line has scrolled out of view.

USE THE STARTMOVIE SCRIPT to set starting values for your variables and text fields.

gDirection stores the direction the plane will fly in: 1 for left, 2 for right.

gTarget stores the number of the cast member assigned to the plane flying across the screen.

gHmove stores the rate at which the target proceeds horizontally across the screen.

```
-- set up scripts
global gDirection, gTarget, gHmove, gVmove, gScore, gShots, gIsShot

-- this is the first script you write, even though you
-- will be adding to it as you work
on StartMovie
  set gDirection = 0
  set gTarget = 0
  set gHmove = 0
  set gVmove = 0
  set gScore = 0
  set gIsShot = 2
  set gShots = 12
  set the text of member "shots" to "12"
  set the text of member "score" to "0"
end
```

gVmove stores the rate at which the target proceeds vertically down the screen.

gScore stores the number of planes the player has successfully shot.

gIsShot tells the program if a plane is currently blowing up.

You can see now why you named the two text fields—this is much clearer than the "set the text of member 9" and "of member 10" wording you would otherwise have to use.

gShots stores the number of shots the player has left.

6 Let the Games Begin

You can also place scripts along Director's timeline. The two scripts you'll write next will execute when the movie reaches a certain frame and as it prepares to leave that frame. To start, double-click the script channel (the one above the frame numbers in the score) to open a new script window. Type the scripts shown here.

The game starts up in a single frame, so when it is entered you need to set the score to zero and the number of shots to 12. These have to be set both in the variables gShots and gScore and in the two text fields that display the variables to the user. You already set up these variables and text fields in the startMovie script, but you need to do it again here in case the player loses and wants to start over.

```
-- set up the game
global gShots, gScore

-- set your globals and your text fields
on enterFrame
  set the text of member "shots" to "12"
  set gShots = 12
  set the text of member "score" to "0"
  set gScore = 0
end enterFrame

-- make your puppets
on exitFrame
  puppetSprite 3, true
  puppetSprite 10, true

  makeTarget
  cursor 200
end
```

DEPENDENT ON WHEN YOU WANT a script to run, you can call your own scripts from enterFrame and exitFrame.

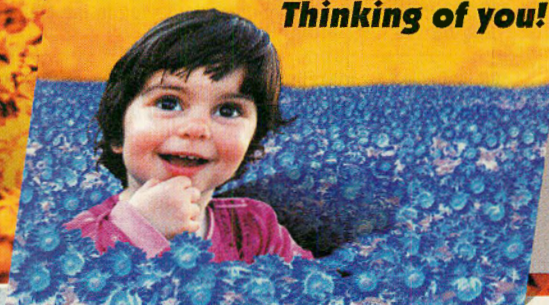
In order for Lingo to move around sprites, it has to describe them as *puppets*. In this case you're making puppets for channel 3 (the plane) and channel 10 (the explosion). You'll need to do this in the exitFrame script. Note that the channel itself is actually the puppet, not the art in it. By declaring the channel a puppet, you can move around what is inside it, swap the sprite with another one, or even make it invisible.

Use the command "cursor 200" in the exitFrame script to hide the usual arrow cursor (this will be important later). There is also a line that reads makeTarget. This is a *handler*, and it calls out to the director movie to find a makeTarget script, which you still need to write.

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7 Pull!

The target is the sprite in channel 3. Before it can actually work as a target, though, you have to make it behave like one in Lingo. The makeTarget script you called needs to pick the

graphic for the target, decide in which direction the target will move, start the target's motion, and play a sound. Enter makeTarget, along with the supporting scripts—setDirection, targetDir, and moveTarget.

The first thing makeTarget needs to do is decide if the plane will move left or right. A tiny script called setDirection performs this task. This script does only one thing—it randomly generates number 1 or 2 and sets the global variable gDirection to that number.

Next, makeTarget has to do some thinking. If setDirection chooses 1, you'll want to pick a plane at random and make sure it is facing left; if it chooses 2, you'll want to pick a plane and make sure it is facing right. MakeTarget does that with two IF-THEN statements, testing whether setDirection has set gDirection to 1 or 2. If it is 2, then the first IF-THEN block executes, randomly picking a member from the cast in spaces 11 through 14 and then flipping the sprite so that it is facing right. The cast is the area where Director holds all the scripts and media. In this particular project, the four planes are in cast spots 11 to 14, so "random (4) + 10" generates a number between 11 and 14. Flip the cast member—all of your images are facing left, and a gDirection of 2 means you want the target to face right.

Once your script has chosen a cast member and determined its direction, it has to make that cast member appear on stage (on the screen). Do this by setting sprite 3 to the cast member number contained in the global variable gTarget.

All that is left for makeTarget to do is play a "whoosh" sound and set the target in motion—it accomplishes this by calling a script called targetDir (see below).

```
on makeTarget
  global gDirection, gTarget
  setDirection
  if gDirection = 1 then
    set gTarget = random(4) + 10
    set the flipH of sprite 3 to false
  end if
  if gDirection = 2 then
    set gTarget = random(4) + 10
    set the flipH of sprite 3 to true
  end if
  set the member of sprite 3 to gTarget
  puppetSound 3, "whoosh"
  targetDir
end makeTarget

on setDirection
  put random(2) into x
  put x into gDirection
  -- 1 = move left
  -- 2 = move right
end
```

Now that you have chosen the target graphic and told it which direction to face, it needs a place to start. Again, you'll use the global variable gDirection to see if the movement will be left or right. Using IF-THEN statements, check gDirection and place sprite 3 at horizontal and vertical coordinates that aren't visible on the stage.

TargetDir also instructs sprite 3 how to move. Using random numbers again, set global variables gHmove and gVmove with numbers between 11 and 25, and 1 and 13, respectively.

You finally have enough information to move the plane around, which you'll do with a new script, moveTarget.

Let's assume that gDirection is 1, so the plane should move left. You need two lines, one to move the target to the left and one to move the target down so that the plane looks like it is flying diagonally. To do this, set the sprite's horizontal and vertical positions, which Director calls locH and locV, respectively. Moving the plane (like most tasks in programming) requires a bit of math. To move the sprite from right to left horizontally, subtract the value of gHmove that you set in targetDir from the current position of sprite 3. The Director's coordinates start at zero in the top left corner of the scene and increase as you move right and down, so lowering the value of the horizontal position moves the plane to the left. Add gVmove to the sprite's vertical position to move the plane down the screen.

The final task for moveTarget is to see if the plane has moved off the stage (off the screen), which it does by calling checkOffStage.

If the plane's heading left, make a new target when it moves more than 55 pixels to the left of the stage.

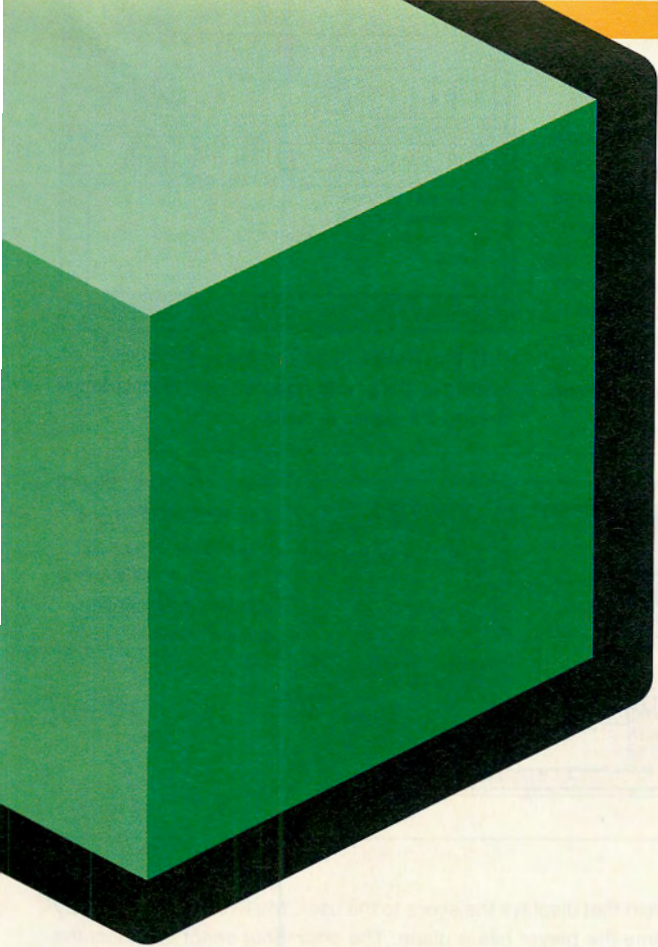
If the plane's heading right, stop it when it moves near the stage's right side.

```
on targetDir
  if gDirection = 1 then
    set the locH of sprite 3 to 450
    set the locV of sprite 3 to 60
  end if
  if gDirection = 2 then
    set the locH of sprite 3 to -50
    set the locV of sprite 3 to 60
  end if
  set x = random(15)
  set gHmove = 10 + x
  set y = random(12)
  set gVmove = 1 + y
  moveTarget
end targetDir

on moveTarget
  if gDirection = 1 then
    set the locH of sprite 3 = (the locH of sprite 3) - gHmove
    set the locV of sprite 3 = (the locV of sprite 3) + gVmove
    checkOffStage
  end if
  if gDirection = 2 then
    set the locH of sprite 3 = (the locH of sprite 3) + gHmove
    set the locV of sprite 3 = (the locV of sprite 3) + gVmove
    checkOffStage
  end if
end moveTarget
```

```
on checkOffstage
  if gDirection = 1 then
    if the locH of sprite 3 < -55 then makeTarget
  end if
  if gDirection = 2 then
    if the locH of sprite 3 > 455 then makeTarget
  end if
end checkOffstage
```

YOU NEED TO KEEP the planes from flying forever. This routine stops them when they go offstage.



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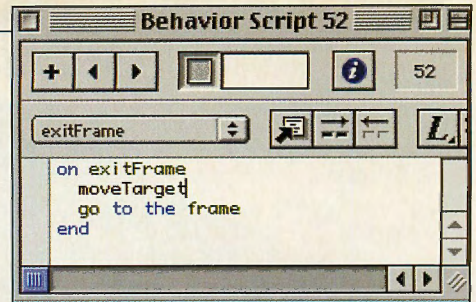
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8 Keep It in the Frame

You've written a lot of scripts, but if you were to play the movie right now it wouldn't work. The movie would play until the point where it creates the target and moves the plane, but then it would just keep going through the score until it reached the end and stop. You need to set up a single frame loop and call the moveTarget script so that the plane will continue to move.

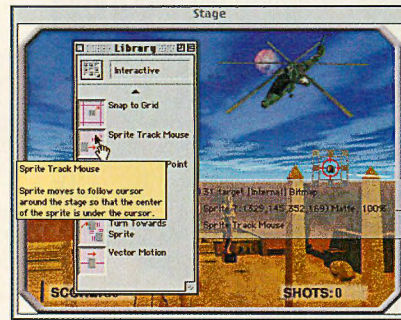
Write another exitFrame script. This one should be a frame or two after the one where you set the puppets. Between "on exitFrame" and "end," write moveTarget to call your script, then write the phrase "go to the frame." This is Lingo for "stay right here"—it places Director into a single frame loop, executing any scripts it finds until it's told otherwise. When the movie reaches this frame, the plane will keep moving until it is off the screen, then a new plane will appear.



THIS EXITFRAME SCRIPT will keep the movie running in place, with repeated calls to moveTarget keeping the planes in motion.

9 Stay on Target

The object of this game is to shoot down planes—you're going to make that possible when the player clicks the plane with the mouse. You made the cursor invisible earlier, so now you have to give the player something to use for targeting. Director has built-in scripts called *behaviors*—you need to use one named Sprite Track Mouse that makes a sprite follow the (invisible) mouse cursor. Put the target graphic in one of the Score channels, then drag the Sprite Track Mouse behavior onto it from the Library palette. Click OK to accept the settings in the dialog box that appears.



MANY COMPLEX SCRIPTS ARE PREWRITTEN and included as behaviors, which can quickly create complex interactivity and navigation.

10 Chalk Up the Hits

Before you write the code to let the player shoot the planes, you need to write some scripts that can keep track of the score and the number of shots the player has left with two scripts called shootTarget and countShot.

ShootTarget will keep track of the score and update the text

field that displays the score to the user. You'll run this script every time the player hits a plane. The countShot script is almost the same, but in reverse. It gets called every time the player fires a shot, subtracting one from the number of remaining shots. The game ends when the number of shots drops to zero.

Since this routine is called when the player makes a hit, you need to give the user credit for the hit. This line adds one plane to the player's score.

These lines form a structure called a *case statement*. Case statements let the program behave in a number of different ways based on the value of a variable—in this case, the player's score. Because you're giving the player ten points per plane, set the text field to ten times the number of planes shot. If the score reaches 100 (or if gScore gets to 10), the program sends the player to a win screen.

This line takes players to the "win" frame if they shoot ten planes.

```
on shootTarget
  set gScore = gScore + 1
  case gScore of
    0: set the text of member "score" to "0"
    1: set the text of member "score" to "10"
    2: set the text of member "score" to "20"
    3: set the text of member "score" to "30"
    4: set the text of member "score" to "40"
    5: set the text of member "score" to "50"
    6: set the text of member "score" to "60"
    7: set the text of member "score" to "70"
    8: set the text of member "score" to "80"
    9: set the text of member "score" to "90"
    10: set the text of member "score" to "100"
  end case
  if gScore = 10 then go to "win"
end shootTarget

on countShot
  set gShots = gShots - 1
  case gShots of
    0: set the text of member "shots" to "0"
    1: set the text of member "shots" to "1"
    2: set the text of member "shots" to "2"
    3: set the text of member "shots" to "3"
    4: set the text of member "shots" to "4"
    5: set the text of member "shots" to "5"
    6: set the text of member "shots" to "6"
    7: set the text of member "shots" to "7"
    8: set the text of member "shots" to "8"
    9: set the text of member "shots" to "9"
    10: set the text of member "shots" to "10"
    11: set the text of member "shots" to "11"
    12: set the text of member "shots" to "12"
  end case
  if gShots = 0 then go to "lose"
end countShot
```

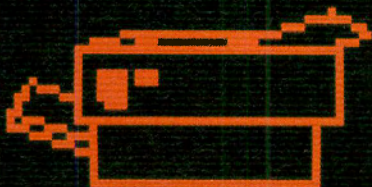
IF YOU HAVE A LOT OF TESTS to perform, case statements are easier to read and execute than a tangle of IF-THEN-ELSE commands.

Every time the player shoots the gun, he or she loses a shot.

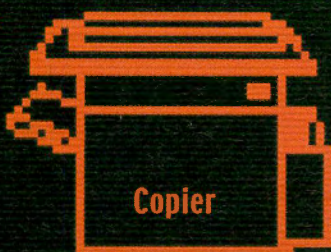
This time, use a case statement to set the number of shots in the shots field.

If the player runs out of shots, the game is over and the player loses. Later, you'll create a frame named "lose" that notifies players when they're out of shots.

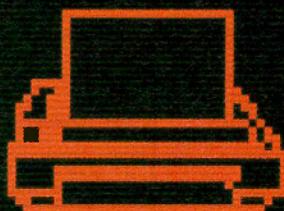
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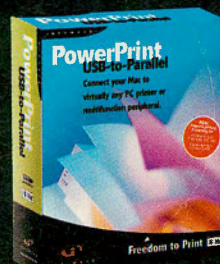
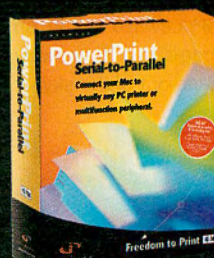


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11 Ready the Pyrotechnics

Until now, all the work you've done has been preparation for the payoff—shooting planes out of the sky. Now add to the exitFrame script you've been using to keep the movie in the game frame, writing a new script to respond to player clicks.

In your new mouseDown script, you'll need to check whether the player has successfully shot the plane. If so, you'll play a shot sound

and display an explosion over the plane. You'll need the variable gIsShot that you set up in startMovie to tell exitFrame the user successfully shot the plane—if you didn't do this, the plane would continue flying along after getting shot! Modify exitFrame as shown so that it checks gIsShot, then responds to planes getting shot by waiting for the sound to fade and putting up another target.

If it is, call the countShot script to lower the number of shots left and call the shootTarget script to raise the score.

Set gIsShot to 1 when a plane gets shot.

Stop the "whoosh" sound that plays while the plane is moving, and play a shot sound.

The explosion graphic should appear on top of the plane when it is hit, so set the locH and locV of the explosion in channel 10 to the same locH and locV as the plane.

The updateStage command makes sure that the screen gets refreshed.

```
--moves target, counts shots
global gShots, gIsShot

on exitFrame
  if gIsShot = 1 then
    if soundbusy(5) then
      go to the frame
    else
      set the locH of sprite 10 to 600
      set gIsShot = 2
      makeTarget
      go to the frame
    end if
  end if
  if gIsShot = 2 then
    movetarget
    go to the frame
  end if
  go to the frame
end

on mouseDown
  if sprite 7 within 3 then
    countShot
    shootTarget
    set gIsShot = 1
    puppetSound 3, 0
    puppetSound 5, "shot"
    set the locH of sprite 10 to the locH of sprite 3
    set the locV of sprite 10 to the locV of sprite 3
    updateStage
  else
    countShot
    set gIsShot = 2
    puppetSound 4, "shot"
  end if
end
```

If gIsShot is 1, the plane's been shot.

Wait for the shot sound to finish.

Now that the explosion's done, remove it and set up a new target. Remember to reset gIsShot!

If the plane's still okay, move it along.

This line checks if the player's target (sprite 7) is over the plane.

If the player didn't hit the target, call countShot to take away the used shot. Remember to set gIsShot to 2 so exitFrame knows the plane's still alive, then play a sound for the shot.

USE MOUSEDOWN TO CHECK FOR MOUSE clicks, then use IF-THEN statements to see whether the player has clicked on a plane.

12 Thumbs Up and Thumbs Down

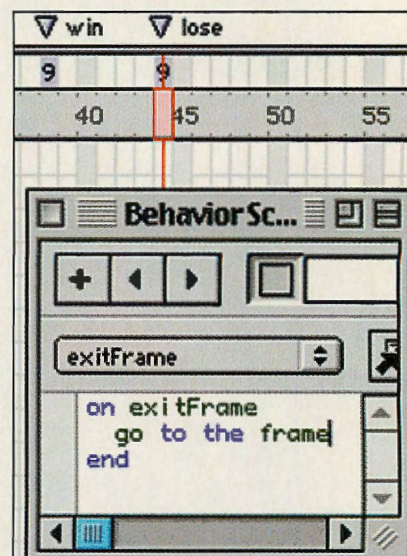
The game will now run, keep track of the score, keep track of the shots fired, and generate new targets when one is hit or moves off the stage. All you need now is to make win and lose frames. Create two markers further down the score, after the game, by clicking in the empty bar just above the script channel. Name one marker "win" and the other "lose." Create scripts stopping the game in both frames—the simplest way is to make exitFrame scripts containing the "go to the frame" statement. It would be better to let the player try again after losing. If you're ambitious, try to code it that way!

13 Go Shockwave

Once you make win and lose frames, you're done—you can create a Shockwave game by choosing Save As Shockwave Movie from the File menu. Select the Generate HTML option, and Director will even create a page with the Shockwave game embedded. Drag the page into a browser and start blasting planes out of the sky.

WHEN YOU HAVE A RUNNING SCRIPT, you can make your movie Web-ready with Director's Save As Shockwave Movie command.

File	
New	
Open...	⌘O
Close	⌘W
Save	⌘S
Save As...	
Save and Compact	
Save All	
Revert	
Import...	⌘R
Export...	⇧⌘R
Create Projector...	
Save As Shockwave Movie...	
Save As Java...	
Preview in Browser	
Page Setup...	⇧⌘P
Print...	⌘P
Preferences	
Recent Movies	
Recent Casts	
Quit	⌘Q



THIS IS A SIMPLE BUT INELEGANT WAY TO END THE GAME—just freeze on the win or lose frame.

Aren't
you tired of
explosions,
big guns and
special huge
effects?



Neither are we.

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Submit technical questions or helpful tips directly via email (askus@macaddict.com) or c/o MacAddict, 150 North Hill Dr., Brisbane, CA 94005.

Howdy Mac addicts! Welcome to my first installment of *Ask Us*. I would like to thank the fabulous Owen Linzmayer for his years of service; we've all learned a lot from him. I greatly look forward to continuing to serve the MacAddict community as we create this column together. After all, these are your questions and the answers are for everyone to share. So keep 'em coming and remember that knowledge is power!—Buz Zoller

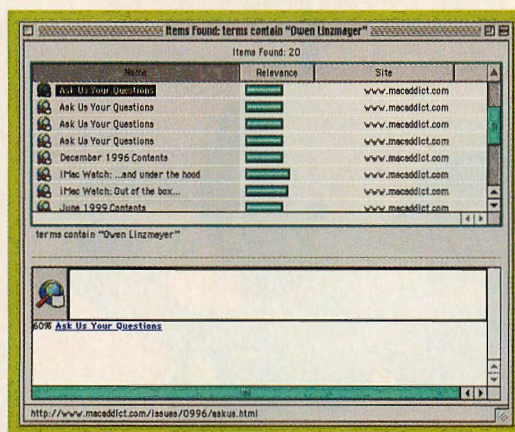
Q Does MacAddict have a Sherlock plug-in for its Web site?

A Absolutely! Use Steve Jobs's favorite search tool to search our site. You can download MacAddict's latest Sherlock plug-in from <http://www.macaddict.com/software/MacAddict.src.hqx>. Simply decompress the archive and drop the plug-in onto your closed System Folder. Then you can use Sherlock to search MacAddict online. For more cool Sherlock plug-ins, check out Apple's Sherlock site at <http://www.apple.com/sherlock/plugins.html>.

Q I was wondering how well the Sony Digital8 Handycam video camcorder works on the new Power Mac G3s and G4s when using the FireWire connection. How does it compare to other DV cameras?

A The new Sony Digital8 camcorders work well with FireWire-equipped new Macs. The only downside is that you need special software to get the video from your camera into

your computer; Sony doesn't provide any Mac software. Final Cut Pro (<http://www.apple.com/finalcutpro>) and iMovie (<http://www.apple.com/imovie>) are Apple's software solutions and can access and edit video data over FireWire. Digital Origin (<http://www.digitalorigin.com>) also has some software products like EditDV and PhotoDV that can access DV over FireWire. You could also use Adobe Premiere 5.1 or later (<http://www.adobe.com>). But if you really want a great deal, try the free Hack TV application (<http://www.warnertechnology.com/Computers/Software/hacktv.html>), which lets you capture from any DV source over FireWire. The Sony Digital8 camcorders use exactly the same DV data format to record video as other DV cameras. The only difference is that the Sony Digital8 camcorders record onto standard



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8mm video tapes, and are capable of playing back analog 8mm video tapes. DV and MiniDV camcorders each use their own tape format. For more on digital video, FireWire, and Macs, check out <http://www.2-pop.com>.

Q I have scanned lots of family data into my Mac: kindergarten drawings, journal notes, photographs, and even video clips. I want to store them on a medium that has a good chance of being accessible in the future. What type of software would you suggest?

A Ah, digital memories! When it comes to longevity, your best bet for storing digital data is currently a recordable compact disc, or CD-R. As long as you store the disc in a strong jewel case, it should last forever. It's a safe bet that CD-ROM drives will be readily available for many years. In terms of format, I'd go with an ISO9660-formatted CD since every platform can read it—Macintosh, Windows, Linux/Unix, and Solaris. Nobody knows what operating systems will exist in 20 or 30 years, but they'll probably be able to read an ISO9660 volume. However, you must also keep your media up-to-date. Periodically transfer data to new media as it becomes standard. You don't want to get stuck with outdated, unreadable media. As for the data itself, remember that problems may arise when you try to access it. If you create a Microsoft Word document, will Word be around in 30 years? Maybe, maybe not. I'd go with the Web. Treat all of your data like a Web site. Save documents as HTML or PDF (Adobe Acrobat) documents, graphics as JPEG or GIF files, and video and audio as QuickTime movies. Tie them all together in a Web site—it's completely cross-platform and guarantees future accessibility.

Q I have just installed a new Ethernet network in my home so my computers can share a newly acquired cable modem (yes, I got permission from my ISP for the multiple IP addresses). The only problem is that my laser printer is not Ethernet capable. It is only accessible via LocalTalk. What are my options for using a LocalTalk laser printer on my Ethernet network?

A First, let's clarify what we are dealing with here. LocalTalk is a cabling system that Macs use to communicate via the AppleTalk network language through their serial ports. EtherTalk is a cabling system that lets your Mac communicate via AppleTalk over Ethernet wiring. The Mac OS only allows AppleTalk to transmit over one cable type at a time. This

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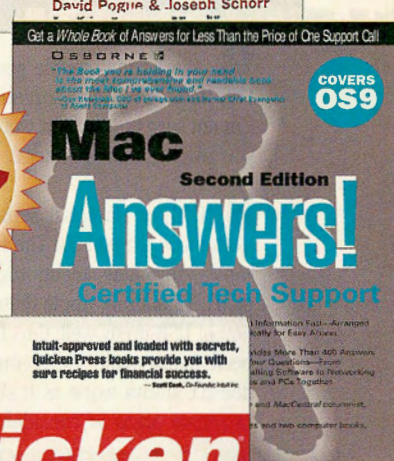
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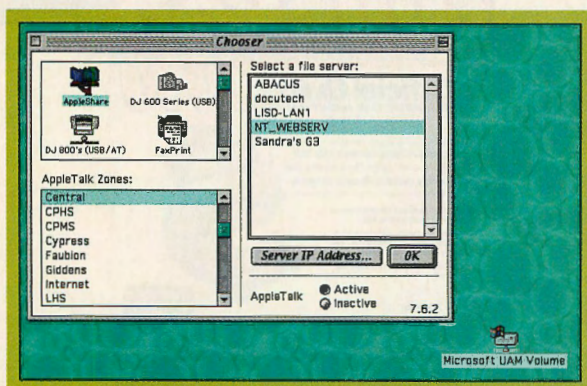
07

YS219

means you can't access your Ethernet and LocalTalk networks simultaneously. However, since it is still just AppleTalk, and the only difference is the cable, both types of cabling can coexist on the same network. You need to connect or bridge the two network types, via either software or hardware. With the software option, a computer with appropriate software installed acts as a bridge for the two networks. Apple's software solution is a control panel called LocalTalk Bridge 2.1, available free from <http://asu.info.apple.com/swupdates.nsf/artnum/n11358>. You need a computer that has Ethernet as well as a serial port, which means iMacs, G3s, and G4s won't work, and you must leave it turned on all the time. This software works fine, but be aware that Apple is no longer updating this control panel and hasn't tested it with Mac OS 8.5 or later. As for the hardware option, you'll find a variety of LocalTalk to Ethernet bridges, such as Farallon's iPrint Adapter (<http://www.farallon.com>) and Asante's AsanteTalk (<http://www.asante.com>). Both offer LocalTalk-to-Ethernet connectivity for around \$100.

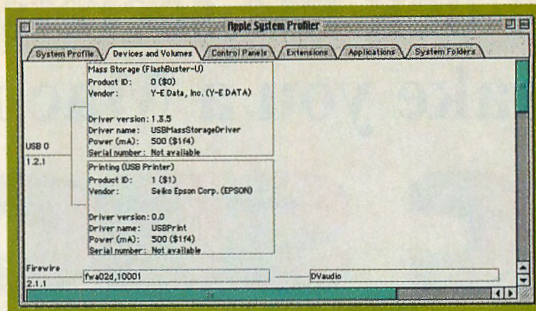
Q I'm having trouble getting some of my USB devices to work correctly with my iMac. I'm not sure how to start troubleshooting; can you give me some pointers?

A USB, or Universal Serial Bus, is a wonderful new technology. The key word there is *new*—any new technology has growing pains. Thankfully, Apple thought out its adoption of USB pretty well; thus far there have not been many major problems. However, USB doesn't always work as it should. There are two main areas of consideration when trou-



WINDOWS NT VOLUMES appear in the Chooser just like any other AppleShare server.

bleshooting USB problems: the driver and the bus. USB driver software offers true plug-and-play functionality. When you connect a device, the Mac recognizes it and loads the driver, and the device is ready to use. It is important that you install the correct driver software. If in doubt, reinstall from the original disk, or



make sure you have the latest driver software by checking iMac2day's listing at <http://www.imac2day.com/peripherals/drivers.shtml>.

If you're positive you have the correct software installed, check the bus—the physical connections. Unplug and replug the device to let the Mac recognize it. If the device has a power switch, try turning it off and on. One trick that often works is to unplug the device from the computer and then plug it directly into the USB keyboard. The keyboard also acts as a hub (a hardware device that provides extra power to connect more peripherals) so the software reacts differently. Remember that even though your iMac or blue-and-white Power Mac G3 has two USB plugs, these are actually the same bus—they're not a true hub. If you want a more technical view of the USB bus, choose Apple System Profiler from the Apple menu, then click the Devices and Volumes tab. Finally, even though USB devices are supposed to be hot-pluggable, it is always a good idea to simply shut everything down and restart.

Q I am a graphic designer in an all-PC office. After months of pleading with management, they have finally decided to buy us Power Mac G4s! The problem is the computer department doesn't have experience with Macs. What do we need to do to add the G4s to our Windows NT network?

A The answer is simple: very little. Microsoft's NT Server software has extensive support for Macintosh clients. Your company's computer department needs to make sure that Windows NT's Services for Macintosh is installed. Then IS should create user accounts and configure the server with the MacFile control panel. Of course, some knowledge of Windows NT is necessary, but it shouldn't be hard. Microsoft even has a nice Services for Macintosh page (<http://support.microsoft.com/support/ServiceWare/NTServer/Nts40/76EWZALGJ.ASP>).

On the Macintosh side of the equation, all you have to do is physically connect the G4s to

the Ethernet network and enable AppleTalk in the Chooser. You should see the NT server in the Chooser. Isn't the Mac great?! You access volumes via the Chooser just as Windows uses Network Neighborhood. As for printing, there are various options. For the latest, see MacWindows at <http://www.macwindows.com>.

Q My school has received lots of old Macintosh computer donations and PowerBooks. Is there a Web address that will give us the specifications on these old models?

A The Web is a great resource for this information. Your first stop should be Apple itself, though finding the information you need may be a little difficult. Start at the support page (<http://www.apple.com/support>), then look at the site map. Here you will find support for older models. A better resource for information about older Macs is <http://www.apple-history.com>. This highly informative site has all you ever wanted to know about everything Macintosh has ever made!

Q I'm trying to set my default home page in Netscape Communicator 4, and the place where you are supposed to type it in the Netscape preferences is grayed out. How can I set my home page?

A Netscape version 4 allows you to use the Mac OS's Internet control panel to define some preferences. The Internet control panel used to be freeware called Internet Config—Netscape still refers to it by this name. To set a default home page in Netscape, click the Identity choice in the Preferences dialog box and then uncheck the Use Internet Config button on the right. Alternatively, open the Internet control panel and set a default home page there. The purpose of the Internet control panel is to store all of your Internet preferences in one location so all your Internet apps can access the same information.

Buz Zoller is a technician for a school district in Texas. He is very proud to be part of the MacAddict team. Go Horns!



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APS CD-RW 6x4x16 SCSI

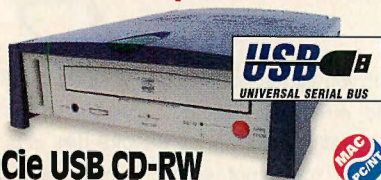
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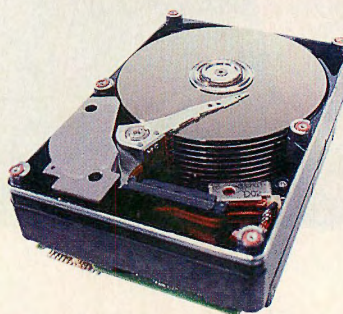
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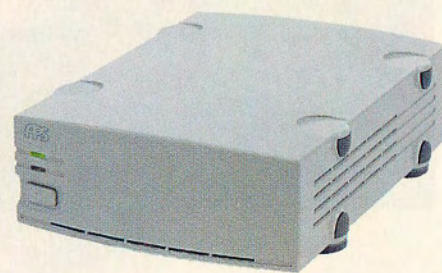
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APS ST 9GB LVD	7200	349.95 419.95
APS I 9.1GB LVD 10K	10000	489.95 559.95
APS Q 9.1GB Ultra 160m LVD 10K	10000	429.95 499.95
APS ST 9.1GB LVD 10K	10000	489.95 559.95
APS I 18GB LVD	7200	499.95 569.95
APS Q 18GB Ultra 160m LVD	7200	549.95 619.95
APS ST 18GB LVD	7200	539.95 609.95
APS I 18GB LVD 10K	10000	829.95 899.95
APS Q 18GB Ultra 160m LVD 10K	10000	729.95 799.95
APS ST 18GB LVD 10K	10000	749.95 819.95
APS I 36GB LVD	7200	1,099.95 1,169.95
APS Q 36GB Ultra 160m LVD	7200	1,029.95 1,099.95
APS ST 36GB LVD	7200	989.95 1,059.95
APS Q 36GB Ultra 160m LVD 10K	10000	1,359.95 1,429.95
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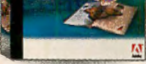
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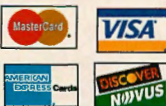
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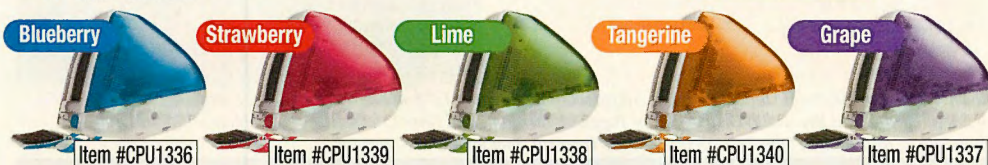
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400Mhz

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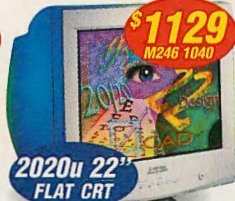
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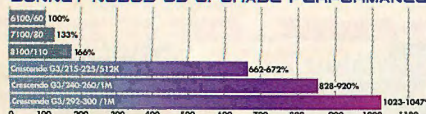
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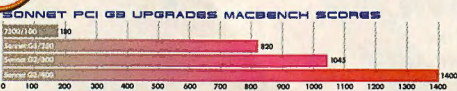
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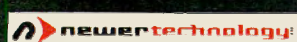
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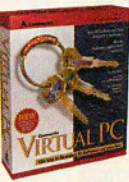


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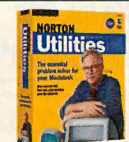


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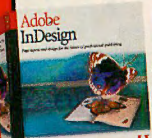


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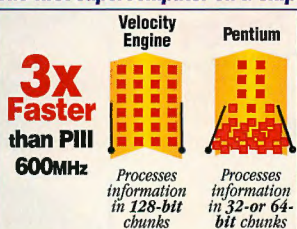
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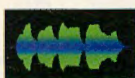


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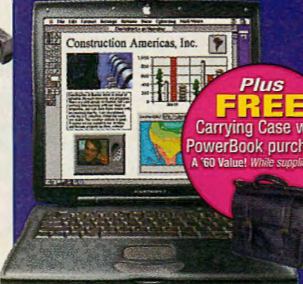


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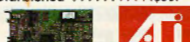
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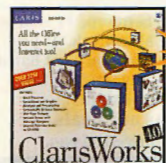
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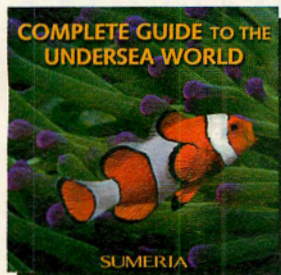
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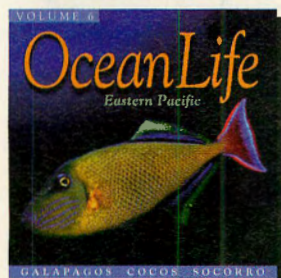
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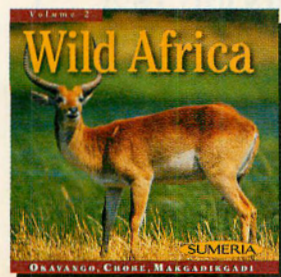
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GENEALOGY - FAMILY HISTORY

REUNION® 6

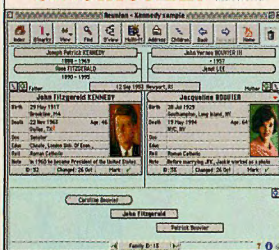
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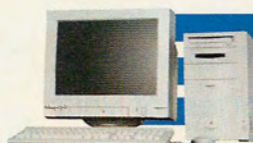
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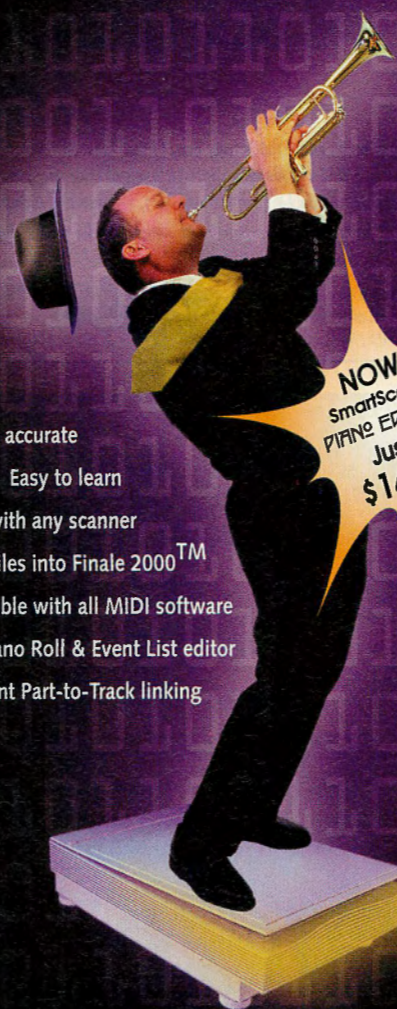
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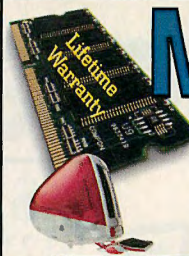


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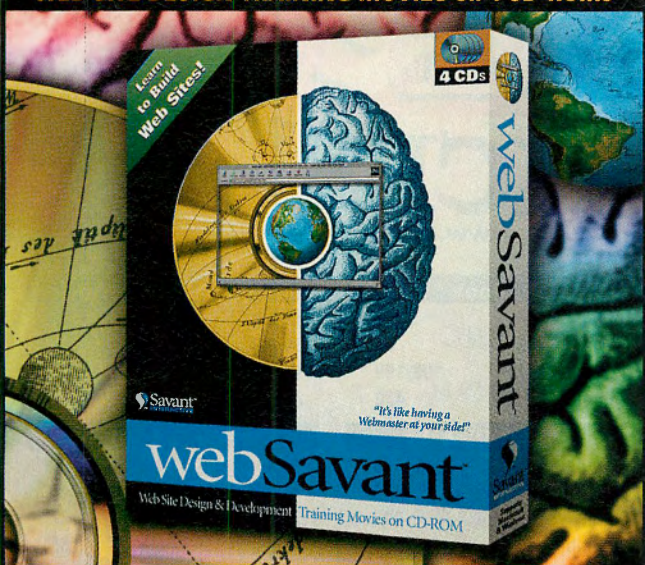
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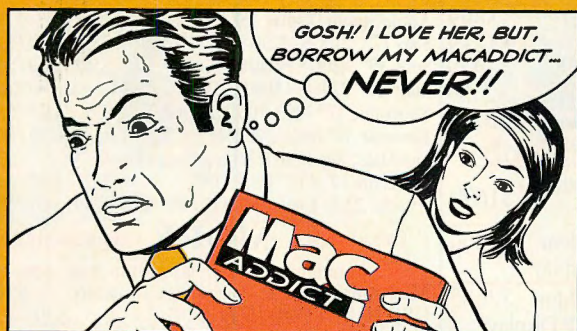
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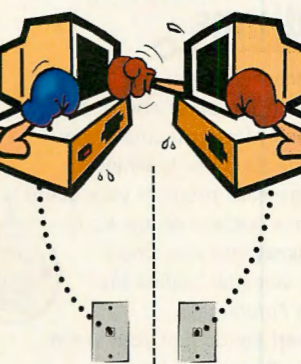


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
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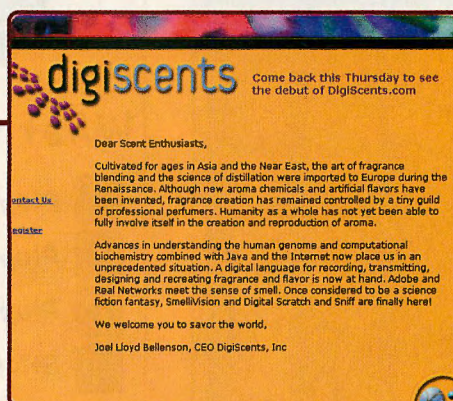

shut down

It takes all kinds of critters to make Farmer Vincent's fritters.

shut down

Wake Up and Smell the Web Site

Remember Smellovision? It's back with a vengeance. A new company called DigiScents (<http://www.digiscents.com>) promises to revolutionize the Internet by adding scents to Web pages via its patented iSmell fragrance synthesizer. The iSmell supposedly plugs into your computer and emits odors based on what you're viewing. We're going to avoid that visit to Farmer Fred's Fertilizer Stash site.



Top Five Scent Mediums

Smellophone lets you smell the person on the other end of a call.
Smellepathy lets you smell what someone far away is smelling.
Smellepresence projects your scent to distant corners of the world.
Smelloscope lets you smell distant celestial bodies (as seen in *Futurama*).
Smelleport sends just your scent instantly to another location.



Apple Corrections

During the recent introduction of the new iMacs and Mac OS 9, Apple made a few teeny mistakes. We feel it's our duty to issue corrections.

- Apple announced that Harmon-Kardon made the new iMac's subwoofer, but it was supposed to announce that Mark Harmon is still the sexiest man alive. Although Apple won't admit it, it regrets the error.
- While showing off the iMac's new injection CD system, Apple meant to point out that the system will also accept vinyl albums, not eight-track tapes. The company is sorry for the confusion this may have caused.
- When Steve Jobs introduced the iMac DV Special Edition, he really meant to say, "On a very special edition of iMac." He's sorry.

MacAddict Corrections

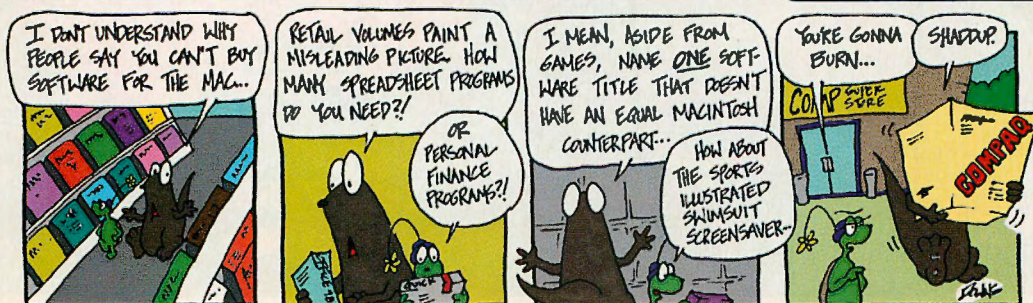
- While cleaning the fridge, Associate Editor Ian Sammis accidentally threw away the Mach microkernel used in Mac OS X because it had gone bad. We apologize for the error.
- In a recent *Get Info* special report, we reported that users should enable virtual memory most of the time, but what we meant to say was that Joan Crawford has risen from the grave and we're all very afraid.
- In last month's feature exposé entitled "Money-Grubbing Greedheads," we neglected to include Bill Gates, Steve Jobs, Esther Dyson, and Alex P. Keaton of *Family Ties*. We are sorry for these omissions.
- For the last three issues, we've been under the delusion that we're all very, very small and may be stepped on any second. We regret falling prey to this phantasm.

Feeling the Heat?

Indicating that Microsoft may be feeling some pressure from Linux's surge in popularity, the Redmond behemoth published the most marvelous piece of FUD (Fear, Uncertainty, and Doubt) yet, debunking myths about Linux. In the spirit of fairness, we're presenting our top five debunked Windows NT myths.

1. Running a Windows NT-based Web server won't cause hair to regrow overnight—or ever, in fact.
2. Blindness associated with NT is an uncommon occurrence.
3. Dogs can indeed smell NT on you after you've used it.
4. When an NT server crashes in the forest and there's no one around, it does make a sound.
5. You won't get french fries with your order of Windows NT.

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BY CHUCK DOWNS



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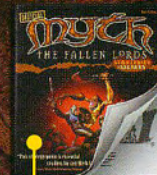
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